

Volume 2

Inventory forms for recommended heritage listings

Volume 2a

Inventory forms for recommended heritage listings

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Alexandria

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Updated names note

Some item names have been updated to reflect information uncovered while finalising inventories or for consistency with other item naming conventions. They do not alter the affected land, as described in the planning proposal.

Additional text is shown below underlined and deleted text as ~~striethrough~~.

Heritage items	Former name (2014)	Updates (2015)	Updated name (2015)	Notes on updates
Alexandria				
33A Bourke Road (and 6 Euston Road)	Sydney Water sewer pipeline		Sydney Water sewer pipeline	No change
See map for location	Doody Street stormwater channel		Doody Street stormwater channel	No change
See map for location	Macdonaldtown stormwater channel		Macdonaldtown stormwater channel	No change
See map for location	Shea's Creek stormwater channel		Shea's Creek stormwater channel	No change
2-6 Birmingham Street	Former Walter Barr Pty Ltd factory including interiors		Former Walter Barr Pty Ltd factory including interiors	No change
22-30 Birmingham Street	Former Sil-Ora Dental Products factory including interiors		Former Sil-Ora Dental Products factory including interiors	No change
27 Birmingham Street	Electricity Substation No. 375 including interiors		Electricity Substation No. 375 including interiors	No change
29-33 Birmingham Street	Former H.G. Whittle & Sons warehouse including interiors	Former H.G. Whittle & Sons warehouse <u>factory</u> including interiors	Former H. G. Whittle & Sons factory including interiors	Name changed to primary historic use
602-612 Botany Road (and 27-31 Ralph Street)	Former Coote and Jorgenson Engineers warehouses including interiors	Former Coote and <u>Jorge</u> nson Engineers warehou <u>ses factory</u> including interiors	Former Coote & Jorgenson Engineers factory including interiors	Name changed to primary historic use and formatted consistently with others
684 Botany Road	Inter-war service station including interiors	Inter-war <u>Former White Way</u> service station including interiors	Former White Way service station including interiors	Name changed to include historic name and add 'former' for past use

47-49 Bourke Road	Q Store including interiors	<u>Former</u> Q Store including interiors	Former Q Store including interiors	Name changed to add 'former' for past use
138-196 Bourke Road	Former Commonwealth Industrial Gases warehouse & stores building including interiors	Former Commonwealth Industrial Gases warehouse & stores <u>building oxygen factory and demonstration block</u> including interiors	Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors	Name changed to primary historic use for identified buildings
16 Euston Road	Electricity Substation No. 117 including interiors		Electricity Substation No. 117 including interiors	No change
40A-42 Maddox Street (and 58-68 Euston Road)	Former Alexandria Spinning Mills including interiors		Former Alexandria Spinning Mills including interiors	No change
1-3 Mandible Street	Former Standard Telephones & Cables industrial building including interiors		Former Standard Telephones & Cables industrial building including interiors	No change
30 Mandible Street	Former Lempriere & Co office building including interiors		Former Lempriere & Co office building including interiors	No change
124 McEvoy Street	Former Electricity Substation No. 152 including interiors		Former Electricity Substation No. 152 including interiors	No change
52-54 O'Riordan Street	Former National Motor Springs igloo building including interiors		Former National Motor Springs igloo building including interiors	No change
82 O'Riordan Street	Electricity Substation No. 225 including interiors		Electricity Substation No. 225 including interiors	No change
38 Ralph Street	Former Wilson Bros Willow Kitchenware Co. warehouse and factory including interiors	Former Wilson Bros Willow Kitchenware Co. warehouse and <u>Ware</u> factory including interiors	Former Wilson Bros Willow Ware factory including interiors	Name changed to primary historic name and use
212-214 Wyndham Street	Former Electric Light Substation No. 89 including interiors		Former Electric Light Substation No. 89 including interiors	No change
Annandale				

1B Booth Street	Sewage Pumping Station No. 3 including interiors		Sewage Pumping Station No. 3 including interiors	No change
Camperdown				
6-10 Mallett Street	Former Grace Bros Repository including interiors		Former Grace Bros Repository including interiors	No change
64-106 Mallett Street	Former Bonds Industries complex including interiors, Substation No. 181, Chesty Bond Mural and former commercial building façade for "Bonds Cafeteria" at 97-88 Church Street	Former Bonds Industries complex including interiors, Substation No. 181, Chesty Bond Mural and former commercial building façade for "Bonds Cafeteria" at 97- 88 99 Church Street	Former Bonds Industries complex including interiors, Substation No. 181, Chesty Bond Mural and former commercial building façade for "Bonds Cafeteria" at 97-99 Church Street	Correction to match existing schedule 5 item name for the cafeteria
Darlington				
2-10 Golden Grove Street	Former Jones IXL factory garage including interiors		Former Jones IXL factory garage including interiors	No change
181 Lawson Street	The Foundry including interiors	The Foundry <u>Former McMurtrie, Kellermann & Co factory</u> including interiors	Former McMurtrie, Kellermann & Co factory including interiors	Name changed to primary historic name and use
Erskineville				
7-19 Coulson Street	H. Brightwell & Sons Pty Ltd. south-east warehouse building including interiors	H. Brightwell & Sons Pty Ltd. <u>Bakewell Brothers</u> south-east warehouse building including interiors	Former Bakewell Brothers south-east warehouse building including interiors	Name changed to primary historic name
127 Railway Parade	Former Gramophone Coy Ltd factory chimney stack	Former Gramophone Coy Ltd factory chimney stack	Former factory chimney stack	Name changed to remove company because chimney does not have one primary historic company name
18-20 Victoria Street	Former shoes and boot factory including interiors	Former shoes and boot Cleveland Shoe Company factory including interiors	Former Cleveland Shoe Company factory including interiors	Name changed to primary historic name
Forest Lodge				

19 Ross Street	Electricity Substation No. 267 including interiors		Electricity Substation No. 267 including interiors	No change
Glebe				
113 Mitchell Street	Former Volunteer Brigades fire station including interiors	Former <u>Glebe Volunteer Brigades fire station</u> <u>Fire Station</u> including interiors	Former Glebe Volunteer Fire Station including interiors	Name changed to primary historic name
Newtown				
10-12 Egan Street	Former Sydney Confectionery Company factory including interiors		Former Sydney Confectionery Company factory including interiors	No change
197-207 Wilson Street	Former Gissing Bros warehouse including interiors	Former <u>F. W. Gissing Bros warehouse</u> <u>factory</u> including interiors	Former F. W. Gissing factory including interiors	Name changes to primary historic name and use
Redfern				
53-63 Great Buckingham Street (and 611-619 Elizabeth Street)	Former Hordern & Sons warehouse including interiors	Former <u>A. Hordern & Sons warehouse</u> <u>factory complex</u> including interiors	Former A. Hordern & Sons factory complex including interiors	Name changed to primary historic name and typology:
99 Renwick Street	Electricity Substation No.112 including interiors		Electricity Substation No.112 including interiors	No change
Rosebery				
6-8 Crewe Place	Former Wrigley's factory	Former Wrigley's factory <u>including interiors</u>	Former Wrigley's factory including interiors	Name changed to clarify includes interiors as with others
85-113 Dunning Avenue	Former Rosella Preserving Manufacturing Co. buildings including interiors	Former Rosella Preserving <u>and</u> Manufacturing Co. <u>buildings</u> <u>factory</u> including interiors	Rosella Preserving and Manufacturing Co. factory including interiors	Name changed to primary historic name and use
88 Dunning Avenue	Electricity Substation No.192 including interiors		Electricity Substation No.192 including interiors	
115-133 Dunning Avenue	Former Commonwealth Weaving Mills including interiors	Former Commonwealth Weaving Mills <u>and</u> <u>Frederick Rose factory</u> including interiors	Former Commonwealth Weaving Mills and Frederick Rose factory including interiors	Name changed to include historic name of second factory

120 Dunning Avenue	Former Otis Elevator Co. Pty Ltd warehouse including interiors	Former Otis Elevator Co. Pty Ltd warehouse including interiors	Former Otis Elevator Co. factory including interiors	Name changed to primary historic name and use
135-151 Dunning Avenue	Former Westinghouse warehouse buildings including interiors	Former Westinghouse warehouse <u>buildings factory</u> including interiors	Former Westinghouse factory including interiors	Name changed to primary historic use
142 Dunning Avenue	Electricity Substation No. 128 including interiors		Electricity Substation No. 128 including interiors	No change
1-11 Hayes Road	Former R.C. Henderson Ltd warehouse including interiors	Former R.C. Henderson Ltd warehouse <u>factory</u> including interiors	Former R. C. Henderson Ltd factory including interiors	Name changed to primary historic use
61-71 Mentmore Avenue (and 34 Morley Avenue)	Former Cyclone Co. of Australia factory including interiors	Former Cyclone <u>Fence and Gate</u> Co. of Australia factory including interiors	Former Cyclone Fence and Gate Co factory including interiors	Name changed to primary historic name
Surry Hills				
268-274 Devonshire Street	Former Hill & Co warehouse including interiors	Former <u>Edward</u> Hill & Co warehouse <u>factory</u> including interiors	Former Edward Hill & Co factory including interiors	Name changed to primary historic name and use: Former Edward Hill & Co factory
470-484 Elizabeth Street	Former W. C. Penfold Co. Ltd. warehouse including interiors	Former W. C. Penfold & Co. Ltd. <u>warehouse factory</u> including interiors	Former W. C. Penfold & Co factory including interiors	Name changed to primary historic name and use
5 Fitzroy Place	Electricity Substation No. 229 including interiors		Electricity Substation No. 229 including interiors	No change
1-15 Foveaux Street	Former Farleigh Nettheim & Co Ltd warehouse including interiors		Former Farleigh Nettheim & Co Ltd warehouse including interiors	No change
47-97 Marlborough Street	Former David Jones factory including interiors		Former David Jones factory including interiors	No change
13-15 Marshall Street	Former Allington Stoveworks warehouse including interiors	Former Allington Stoveworks warehouse <u>factory</u> including interiors	Former Allington Stoveworks factory including interiors	Name changed to primary historic use
11-13 Randle Street	Former R.C. Henderson Ltd warehouse including interiors	Former R.C. Henderson Ltd warehouse <u>factory</u> including interiors	Former R. C. Henderson Ltd factory including interiors	Name changed to primary historic use

4-34 Wentworth Avenue	Group of warehouses including interiors	Group of warehouses <u>Former warehouse group</u> including interiors	Former warehouse group including interiors	Name changed to add 'former' for past use and re- order words
Sydney				
115 Clarence Street	Former Noyes Brothers Ltd warehouse including interiors	Former Noyes Brothers <u>Ltd Bros</u> warehouse including interiors	Former Noyes Bros warehouse including interiors	Name changed to primary historic name
185 Clarence Street	Former McLaughlin & Co Pty Ltd warehouse including interiors	Former McLaughlin & Co Pty <u>Ltd Shelley</u> warehouse including interiors	Former Shelley warehouse including interiors	Name changed to primary historic use
193-195 Clarence Street	Shorter House store & offices including interiors	Shorter House store & offices including interiors	Shorter House including interiors	Name simplified
123-129 Clarence Street (and 252-258 Kent Street)	Former Edwards Dunlop & Co warehouses including interiors		Former Edwards Dunlop & Co warehouses including interiors	No change
426-430 Kent Street	Clarence Kent House warehouse	Former Clarence Kent <u>Grace</u> House warehouse including interiors	Former Grace House warehouse including interiors	Name changed to primary historic name
Ultimo				
10-16 Bay Street	Part Bay Street Depot including interiors		Part Bay Street Depot including interiors	No change
Waterloo				
723 Elizabeth Street	Former William Brooks industrial building including interiors	Former William Brooks industrial building factory including interiors	Former William Brooks factory including interiors	Name changed to primary historic use
378 George Street	Electricity Substation No. 75 including interiors	Electricity <u>Light</u> Substation No. 75 including interiors	Electricity Substation No. 75 including interiors	Name changed to primary historic name
23 Lachlan Street	Former Electricity Substation No. 109 including interiors		Former Electricity Substation No. 109 including interiors	No change
Zetland				

146-158 Joynton Avenue	Former Joseph Lucas industrial building including interiors	Former Joseph Lucas industrial building showroom, <u>workshop and office</u> including interiors	Former Joseph Lucas showroom, workshop and office including interiors	Name changes to primary historic uses
Conservation area name (2014)			Updated name (2015)	Notes on updates
Alexandria				
North Alexandria industrial heritage conservation area			North Alexandria industrial heritage conservation area	No change
Alexandria & Beaconsfield				
William Street industrial heritage conservation area			William Street industrial heritage conservation area	No change

Inventory 1

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

Address: Between McEvoy Street & Bourke Road (as marked on the map)

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish: Alexandria

State: NSW

County: Cumberland

Other/former names:

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described by the Sydney Local Environmental Plan

Item type: Built

Group: Utilities - Sewerage

Category: Sewage Pipe

Owner: State Government

Admin codes:

Code 2:

Code 3:

Current use: Sewer pipeline

Former uses: Sewer pipeline

Assessed significance: Local

Endorsed significance:

Statement of significance: Built in 1891 as part of Sydney's Southern Main Outfall sewer system, the pipeline represents a period of major improvement to the public infrastructure in the Alexandria area around the turn of the century. The construction of this purpose-built sewer to transport waste to Sydney's first sewage reuse farm at Botany Bay provides evidence of significant government initiatives and technological advancements of the time to improve public health and conditions in Sydney following the typhoid outbreaks of the 1870s to 1890s. By replacing the use of open stormwater drains and natural watercourses for sewage, and moving sewage away from southern Sydney's industry and settlements, the pipeline documents the improved services and environment in Alexandria at the turn of the century which supported its subsequent intensified development as an industrial centre.

The pipeline is an uncommon example of an above-ground, elevated segment of the Southern Main Outfall sewer system, which otherwise runs mostly underground. It demonstrates late nineteenth century methods for sewer construction utilising cast iron pipes raised on sandstone plinths. The elevation of this segment on an aqueduct reflects its gravity-assisted operation and a late nineteenth century engineering solution for running a sewer line across the low-lying, flood-affected land of a former creek.

Aesthetically, the iron pipeline raised on sandstone plinths contributes to the area's distinctive character derived from its low-lying topography and industrial history. The robust, unadorned design of these exposed services reflects the area's earlier industrial history in the same manner as the intersecting stormwater channels. Aesthetically, the line of the pipe and its setting forms an internal avenue between McEvoy Street and Bourke Road, similar to a street, which reinforces the street pattern in the area by continuing the line and width of Harley and Reserve Streets.

As supporting built infrastructure, the sewer pipeline forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The Sydney Water sewer pipeline is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Sewer pipe history:

Towards the end of the nineteenth century, Sydney's intensified development, growing population and combined system for stormwater and sewage disposal contributed to severe public health crises. Outbreaks of Enteric Fever (typhoid) plagued Sydney from the 1870s to 1890s. In 1875 the government appointed the Sydney City and Suburban Health Board to report on the best means of sewage disposal. This board recommended the construction of outfall sewers.

In its final report in 1877 the Sydney Sewage and Health Board decided that the southward draining sewage from the city and southern suburbs should be taken to a sewage farm on the edge of Botany Bay.

The subject elevated section of sewer between McEvoy and Bourke Streets was constructed by the Public Works Department in 1891 as part of the Sydney's Southern Main Outfall sewer. This early network of sewers transported waste to the Botany Bay sewage farm, Sydney's first sewage reuse scheme (Sydney Water, The history of Sydney Water, c.2012). This sewer scheme was the second constructed in Sydney to service the southern part of the city.

This sewer formed part of the Macdonaldtown and Alexandria Main Branch of the Southern Main Outfall sewer, which served Alexandria, Erskineville and Newtown. Sewage was transported mostly underground through cast and wrought iron pipes measuring 30 inches in diameter. The subject segment of pipeline was elevated on an aqueduct of sandstone plinths because it crossed the low-lying ground of Shea's Creek before the creek was channelled. It connected to the sewer line extending down O'Riorden Street, which originally ran by gravity to terminate at the sewage farm at Botany Bay.

The Botany Bay sewage farm was established in 1887 as an experiment to reuse sewage using the method of 'intermittent downward filtration', instead of the previously favoured direct discharge into the sea. At this farm, land was used as a filter to drain and purify the sewage in rotating settlement beds before the drained sewage was discharged into the bay. After a short period, the land fertilised by sewage was then used to grow crops, in a similar way to the established Chinese market gardens of the time which also used sewage as fertiliser. Unsold produce was fed to livestock (W V Aird, The Water Supply, Sewerage and Drainage of Sydney, Sydney, 1961, p 137-41). This approach was controversial at the time during a period when the science and technology for treating and managing sewage was still developing (Sharon Beder 1993).

A number of contracts were let in 1889 for construction of sewerage lines for the Southern Outfall Sewer including Alexandria (NSW, Public Works Department, Annual Report, 1891, p 60). One of the main contracts let included the Macdonaldtown and Alexandria Branch Sewer, measuring 53.52 chains (1,076.7 metres) in length (NSW, Public Works Department, Annual Report, 1891, p 61).

The Macdonaldtown and Alexandria Branch Sewer was completed in April 1891 (NSW, Public Works Department, Annual Report, 1891, p 61). It was handed over to the Water Board in 1892 (W V Aird, The Water Supply, Sewerage and Drainage of Sydney, Sydney, 1961, p 141).

The construction of the Southern Outfall Sewer system represented a significant advancement of the time and a major government initiative to improve the health of Sydney's inhabitants. By ending the discharge of sewage into the harbour, replacing the use of open stormwater drains and natural watercourses for sewage, and moving sewage away from industry and settlements, this sewer system dramatically improved the living conditions for

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

city workers and residents, including the adjacent areas of Alexandria and Waterloo.

Following the construction of the separate sewer and stormwater systems in the 1890s, disease dramatically declined in Sydney. According to the medical advisor to the Water Board, mortality rates from diarrhoea, diphtheria and phthisis (pulmonary tuberculosis) decreased. In the Erskineville, Redfern and Waterloo districts, mortality rates from typhoid declined as much as two-thirds (Aird 1961).

Themes: **National theme**
4. Settlement

State theme
Utilities

Local theme
Sewer pipeline

Designer: Public Works Department

Builder: Public Works Department

Year started: 1891

Year completed: 1891

Circa: Yes

Physical description: Constructed in 1891 by the Public Works Department as part of the Southern Main Outfall sewer system, the sewer pipeline comprises the exposed above-ground segment of cast iron pipes, elevated on an aqueduct of sandstone plinths. The pipes measure 30 inches in diameter, with cast iron stands on sandstone plinths. The rusticated sandstone and iron construction is typical of the Federation period.

The pipeline extends from McEvoy Street to Bourke Road, crossing over the Shea's Creek stormwater channel. The line of the subject section of the pipe forms an internal avenue between McEvoy Street and Bourke Road. It follows the street pattern in the area by continuing the line and width of Harley and Reserve Streets, running perpendicular to Bowden Street. The sewer pipe lines the green space of Perry Park. Part of the land under and adjoining the pipeline has been paved with concrete.

Beyond the subject section, the pipeline continues underground to where sewage is discharged at Botany Bay.

Category: Utilities infrastructure - sewer. Period: Federation. Materials: Iron and sandstone.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Modification dates: Timeline of known dates for changes to the system and site:

1889

Number of contracts let for construction of sewerage including Alexandria.

1890

Contract for the Macdonaldtown and Alexandria Branch Sewer let.

April 1891

Macdonaldtown and Alexandria Branch Sewer completed.

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

Recommended management: The sewer pipeline should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared prior to any major works being undertaken.

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Do not paint, render or seal the rusticated sandstone plinths.

Minimise further obstruction or enclosure of the pipeline.

Ensure that works around the pipeline do not damage the stone plinths and cast iron supports.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): [Historical significance] Built in 1891 as part of Sydney's Southern Main Outfall sewer system, the pipeline represents a period of major improvement to the public infrastructure in the Alexandria area around the turn of the century. The construction of this purpose-built sewer to transport waste to Sydney's first sewage reuse farm at Botany Bay provides evidence of significant government initiatives and technological advancements of the time to improve public health and conditions in Sydney following the typhoid outbreaks of the 1870s to 1890s.

By replacing the use of open stormwater drains and natural watercourses for sewage, and moving sewage away from southern Sydney's industry and settlements, the pipeline documents the improved services and environment in Alexandria at the turn of the century which supported its subsequent intensified development as an industrial centre.

As supporting built infrastructure, the sewer pipeline forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): [Historical association significance] The sewer pipe is associated with the NSW Public Works Department.

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

Criteria c): The pipeline is an uncommon example of an above-ground, elevated segment of the Southern Main Outfall sewer system, which otherwise runs mostly underground. It demonstrates late nineteenth century methods for sewer construction utilising cast iron pipes raised on sandstone plinths. The elevation of this segment on an aqueduct reflects its gravity-assisted operation and a late nineteenth century engineering solution for running a sewer line across the low-lying, flood-affected land of a former creek.

**[Aesthetic/
Technical
significance]**

Aesthetically, the iron pipeline raised on sandstone plinths contributes to the area's distinctive character derived from its low-lying topography and industrial history. The robust, unadorned design of these exposed services reflects the area's earlier industrial history in the same manner as the intersecting stormwater channels. Aesthetically, the line of the pipe and its setting forms an internal avenue between McEvoy Street and Bourke Road, similar to a street, which reinforces the street pattern in the area by continuing the line and width of Harley and Reserve Streets.

Criteria d): Social significance requires further study to ascertain the value of this pipeline to communities.
**[Social/Cultural
significance]**

Criteria e): The exposed pipeline may have research potential into late-nineteenth century construction and engineering of sewer systems, associated with Sydney's southern main outfall and first sewage reuse farm at Botany Bay.
**[Research
significance]**

Criteria f):
[Rarity]

Criteria g): The pipeline represents an example of an above-ground sewer pipeline from the late-nineteenth century. As part of the southern main outfall sewer system, it also represents Sydney's engineering of the sewage system during the late nineteenth century to address major public health issues.
[Representative]

Intactness/Integrity: High integrity

References:	Author	Title	Year
	Henry, F. J. J	The Water Supply and Sewerage of Sydney. Sydney, M.D.W.S	1939
	RTA	Aerial Photographs of Sydney May-June 1943.	1943
	City of Sydney	Aerial Survey of the City of Sydney	1949
	City of Sydney/ City Building Survey	City Building Surveyors Detail Sheets	1956
	Frances Pollon	The book of Sydney suburbs	1996
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Higinbotham & Robinson	Alexandria Sydney	1890
	Higinbotham & Robinson	Waterloo Sydney	1890
	Heritage Council	State Heritage Register entry for Sewage Pumping Station 3, re	
	Donald Hector	Sydney's Water Sewerage and Drainage System	2011
	Sharon Beder	From Sewage Farms to Septic Tanks: Trials and Tribulations in	1993
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	Sydney Water	The History of Sydney Water, Sydney's Water Supply and Was	2012
	City of Sydney	The Streets of Green Square, The past shapes the future	

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage	!	2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	1		DP	230727
	LOT	3		DP	204392

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015 Sydney

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing: Name

Title

Number

ListingDate

City of Sydney Industrial and Ware Heritage study

Data entry: Data first entered: 05/08/2014

Data updated: 15/05/2015

Status: Completed

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: Sydney Water sewer pipeline

Copy right: City of Sydney

Image by: JCIS Consultants

Image date: 15/11/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3452c540c7058814f49912709ff92213865.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3452c540c7058814f49912709ff92213865.jpg

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: Location of the Sydney Water sewer pipeline

Copy right:

Image by: SIX maps/City Plan Heritage overlay

Image date: 27/08/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345bf36010054f642a28d84e9a11d1ec8ec.jpg>

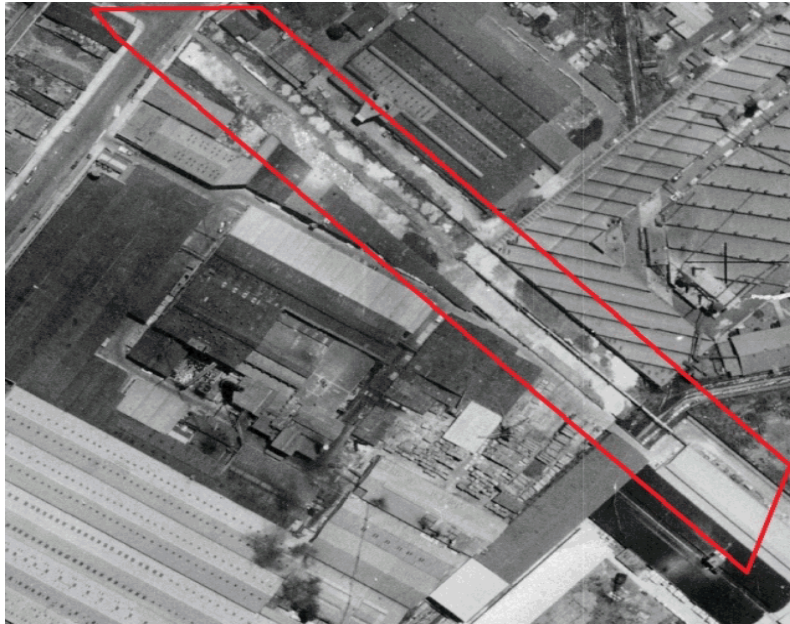
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345bf36010054f642a28d84e9a11d1ec8ec.jpg

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: 1949 aerial showing the pipeline to the west of the junction with the stormwater channel

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1949

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3452518ac97110c4257a4207d237dc7c731.jpg>

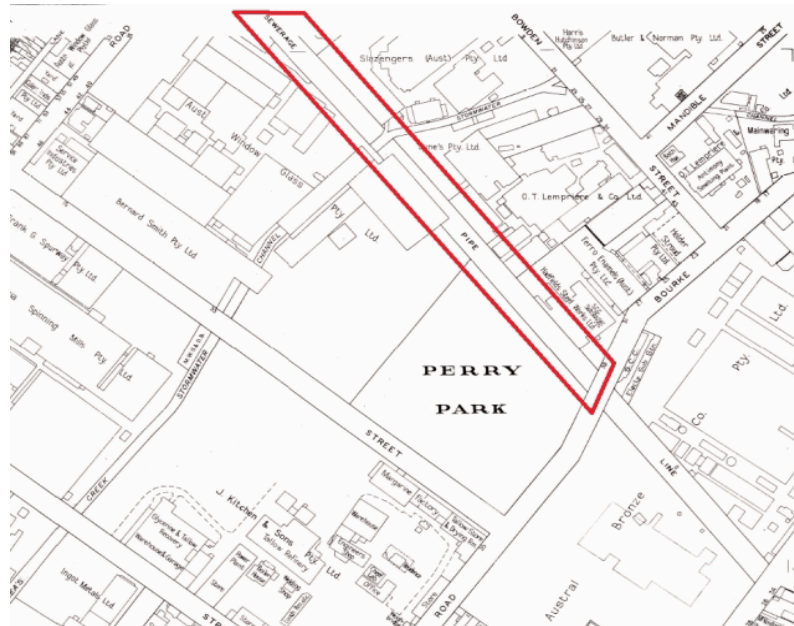
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3452518ac97110c4257a4207d237dc7c731.jpg

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing part of the pipeline circled and surrounding industries by this time

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3456633f7d8793248109d82c7cfbc683327.jpg>

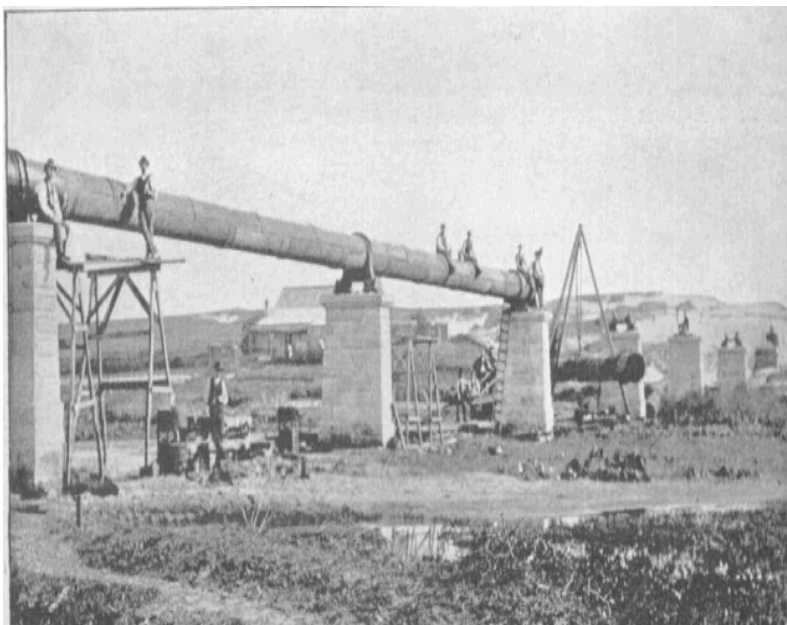
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3456633f7d8793248109d82c7cfbc683327.jpg

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: The sewer pipeline under construction in 1891

Copy right: Sydney Water

Image by: NSW, Public Works Department, Annual Report, 1891

Image date: 01/01/1891

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345988f2b6c0fb04ed5b693b6b46151ab8a.jpg>

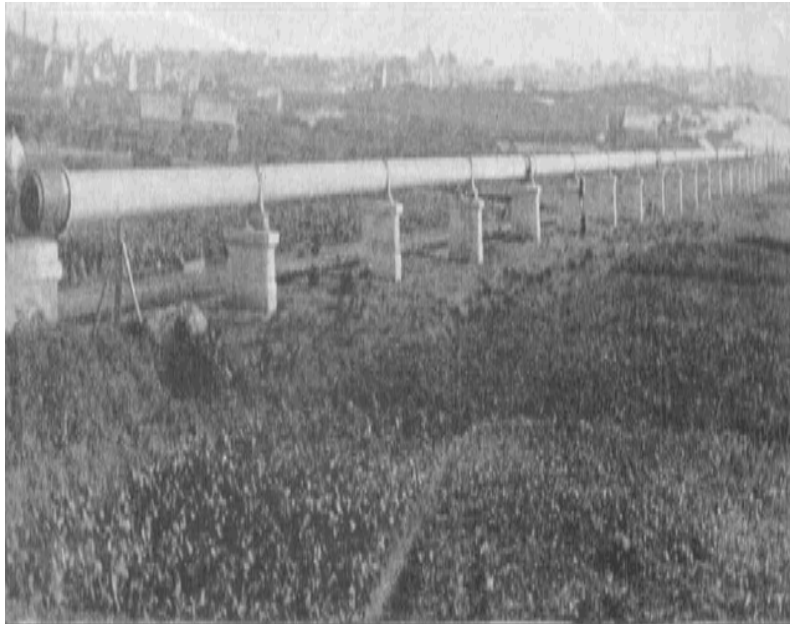
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345988f2b6c0fb04ed5b693b6b46151ab8a.jpg

Item name: Sydney Water sewer pipeline

Location: Between McEvoy Street & Bourke Road (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: The completed sewer pipeline in 1891, located between McEvoy and Bourke Streets

Copy right: Sydney Water

Image by: NSW, Public Works Department, Annual Report, 1891

Image date: 01/01/1891

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34545ffc59b7f3447b483ffc0c24d8f278.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34545ffc59b7f3447b483ffc0c24d8f278.jpg

Inventory 2

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Address: Doody Street (as marked on the map)

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

State: NSW

Parish: Alexandria

County: Cumberland

Other/former names: Sheas Creek catchment (SWMAP0063-SW_089)

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Utilities - Drainage

Category: Other - Utilities - Drainage

Owner: State Government

Admin codes:

Code 2:

Code 3:

Current use: Stormwater channel

Former uses: Stormwater channel

Assessed significance: Local

Endorsed significance:

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Statement of significance: Built in 1931-1934, the Doody Street stormwater channel, together with the other open stormwater channels draining into the Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. The construction of this channel represents significant government initiatives to improve health and sanitation, control floods, provide work for the unemployed during the 1930s depression and support the development of industry in the area during the early twentieth century.

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the location of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of area, in particular by opening up large tracts of land for secondary industry. The number and scale of inter-war and post-war industrial buildings located alongside the open channel system demonstrate the close relationship between the construction of the channels and the industrial development of the area.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's stormwater management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.

Aesthetically, the open brick and concrete stormwater channel running through the heavily developed landscape of Alexandria contributes to the area's distinctive character derived from its low-lying topography and industrial history. The English bond brickwork and bullnosed coping demonstrate typical construction methods of the period. The robust masonry materials and utilitarian design relate to the surrounding inter-war and post-war industrial buildings.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The Doody Street stormwater channel is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

**Historical notes
of provenance:**

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street. The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians were working in city industries than in farms or mines.

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Channel history:

The subject land is shown in early maps as flat, swampy and largely unoccupied, intersected by the main waterway of Shea's Creek. The creek originally ran from the former swamps of Waterloo to Cooks River and then into Botany Bay, which drained the catchment area of Waterloo, Alexandria and Erskineville.

Evidence of the early Aboriginal use of the creek was found during excavation works in 1896 which uncovered dugong bones, two stone hatchet heads and the remains of a forest in the estuarine clay below the low tide level. Close examination by the then curator of the Australian Museum, Robert Etheridge, revealed the animal had been butchered by a blunt-edged cutting or chopping instrument (Ringer 2013).

Towards the end of the nineteenth century, Sydney's intensified development, growing population and combined system for stormwater and sewerage disposal contributed to severe public health crises. Outbreaks of Enteric Fever (typhoid) plagued Sydney from the 1870s to 1890s.

In 1890 the secretary for Public Works, Bruce Smith, directed that stormwater drainage be provided for Sydney (Aird, *The Water Supply, Sewerage and Drainage of Sydney*, Sydney, 1961, p 201). Before this direction, stormwater was carried by either combined sewers or natural water courses, resulting in unsanitary public health conditions. The subsequent construction of purpose-built stormwater drains enabled stormwater drainage to be separated from the sewer (Sydney Water, *Johnstons Creek Stormwater Channel No. 55*, nd).

During the 1890s the Public Works Department converted the lower reaches of Sheas Creek into a navigable canal (NSW, Public Works Department, *Annual Report*, 1891, p 3). Originally known as the Sheas Creek canal, it was later re-named the Alexandra Canal after Princess Alexandra, the wife of King Edward VII (Department of Public Works & Services, *Sheas Creek Woolsheds Conservation Management Plan*, 1999).

By 1896 the upper section of canal had been completed (NSW, Public Works Department, *Annual Report*, 1896, p 24). The lower section was completed in 1897 with sides pitched with stone. A concrete bed was laid at the head of the canal to allow water from Shea's Creek to enter and a total of 180 trees from the Botanic Gardens planted along its banks (NSW, Public Works Department, *Annual Report*, 1897, p 35). Tidal water was allowed into the canal on 26 October 1897 (NSW, Public Works Department, *Annual Report*, 1898, p 32). A plan to extend the canal further to the north to Buckland Street was never constructed (Department of Public Works & Services, *Sheas Creek Woolsheds Conservation Management Plan*, 1999).

This construction of the canal attracted industry to nearby land. The area however remained low-lying and swampy.

Theories of health and amenity current at the time insisted that such areas should be drained by concrete or brick-lined channels (stormwater drains) to remove excess water for health reasons. This had the useful by-product of converting land into sites suitable for industrial use.

Works to channelise the natural waterways of Sheas Creek began in approximately 1896. A network of stormwater channels were constructed in stages to drain into the Alexandra Canal, now referred to as the Sheas Creek channel to the north, the Macdonaldtown channel to the west and the Doody Street channel to the east of the canal.

A total of nine main drains for stormwater had been constructed by 1897 (Aird, *The Water Supply, Sewerage and Drainage of Sydney*, Sydney, 1961, p 203). It is unclear whether this included the earliest stage of the subject

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

stormwater channels.

The Shea's Creek stormwater channels to the north of the canal were constructed in stages from approximately 1896 to 1906. The Macdonaldtown section of the channel extending west from the canal to the present Sydney Park Road (a continuation of Huntley Street) was completed in 1904. The channel to the east of the canal beside Doody Street was completed in the later period in circa 1931-1934.

In 1899 a survey was underway for an extension of the Shea's Creek stormwater channel to Botany Road from where it then terminated at McEvoy Street (NSW, Public Works Department, Annual Report, 1899, p 113). A concrete storm water channel between McEvoy Street and Botany Road was constructed using day labour between September and December 1900 (NSW, Public Works Department, Annual Report, 1901, p 122).

In 1901 Public Works records show that large numbers of men were employed to further extend the stormwater channels at Alexandria (NSW, Public Works Department, Annual Report, 1901, p 12).

In 1901 a decision was also made to extend the stormwater channel through Alexandria. This included a plan to extend the northern end of the Shea's Creek canal to connect pre-existing channels near Buckland Street and Wyndham Street, and to construct the branch towards Waterloo crossing the main southern sewer near Bourke Street (NSW, Public Works Department, Annual Report, 1901, p 122).

The Shea's Creek stormwater channel was then extended from Botany Road to the Quatre-Bras wool-scouring works near Wyndham Street in 1903 (NSW, Public Works Department, Annual Report, 1903, p 114).

In 1904 it was reported that the Shea's Creek stormwater channel serving the districts of Newtown, Macdonaldtown, Redfern, and Alexandria and Waterloo had been extended at a cost of £1,300, and a gap of 2,400 feet (731.5 metres) remained at this time between the channel and the canal (NSW, Public Works Department, Annual Report, 1904, p 11). The work involved construction of a channel along the creek from Botany Road near Grimley's tannery to the canal with a concrete base and sides of brickwork. The walls were topped with moulded concrete blocks with a bullnose profile (NSW, Public Works Department, Annual Report, 1904, p 51).

A short length of channel was constructed at Huntley Street in 1904. This appears to encompass the Macdonaldtown branch from the present Sydney Park Road (a continuation of Huntley Street) to the canal (NSW, Public Works Department, Annual Report, 1904, p 51).

A sum of £5,479 had been spent in 1905 on the stormwater channel from Botany Road to the old bed of Shea's Creek (NSW, Public Works Department, Annual Report, 1906, p 31). A further sum of £4,594 was spent in 1906 extending the storm water channel to Shea's Creek (NSW, Public Works Department, Annual Report, 1906, p 31). By 1906, the main channel running from 10 chains (201 metres) below Botany Road, which had been suspended for some years, was completed to the head of Shea's Creek canal, thereby completing the drainage system for Alexandria and Waterloo (NSW, Public Works Department, Annual Report, 1906, p 73).

The channel running almost due north to Alexandria Park was the next section to be completed. In 1911 Alexandria Council requested a stormwater channel connecting existing channels at Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel in order to complete the storm water scheme. It would be partially underground and partially an open channel measuring 58 chains long (1,167 metres) and estimated to cost £9,000 (NSW, Public Works Department, Annual Report, 1911, p 56). The work was underway using day labour the following year. The base and sides were proposed to be constructed of concrete for a length of 32.25 chains (648.8 metres). Another branch crossing McEvoy Street and running close to Botany Road near Wyndham Street was also in progress, constructed of a reinforced concrete pipe. It was described then as draining an area where many factories were being established (NSW, Public Works Department, Annual Report, 1912 p 61). The stormwater channels at Alexandria had been completed by 1913 at a cost of £7,836 and were then transferred to the Water Board (NSW, Public Works Department, Annual Report, 1913, p 6, 44).

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

The Public Works Department designed further stormwater channels for Shea's Creek in 1920 (NSW Public Works Department, Annual Report, 1920, p 100). Between 1930 and 1935, major work occurred on expanding the stormwater drainage system when unemployment relief funds were used to construct numerous stormwater drains across Sydney (W V Aird, The Water Supply, Sewerage and Drainage of Sydney, Sydney, 1961, p 206).

The Doody Street channel was constructed in approximately 1931-34 as part of the unemployed relief programme (NSW Public Works Department, Annual Report, 1934, p 44-5). A list of stormwater drainage areas provided by F J J Henry's 1939 history of the Water Board listed the Doody Street channel, which drained Alexandria, Mascot and Waterloo, as being first rated from 6 March 1931 (F J J Henry, The Water Supply and Sewerage and Drainage of Sydney, Sydney 1939, Table opp p 25).

The construction of the purpose-built stormwater system, separate to the sewer, represented a significant advancement of the time and a major government initiative to improve the health of Sydney's inhabitants.

Following the construction of the separate sewer and stormwater systems in the 1890s, disease dramatically declined in Sydney. According to the medical advisor to the Water Board, mortality rates from diarrhoea, diphtheria and phthisis (pulmonary tuberculosis) decreased. In the Erskineville, Redfern and Waterloo districts, mortality rates from typhoid declined as much as two-thirds (Aird 1961).

Themes: **National theme**
4. Settlement

State theme
Utilities

Local theme
Stormwater channel

Designer: Public Works Department

Builder: Public Works Department

Year started: 1931

Year completed: 1934

Circa: Yes

Physical description: Built in approximately 1931-1934, the stormwater channel comprises an open drain constructed of concrete and brick with bull-nosed coping.

The subject part of the channel extends approximately 1 kilometre to the west of the Alexandra Canal, crossing under the roads of Bourke Road, O'Riordan and Ralph Streets, terminating in two branches at Doody Street and Botany Road.

While open for most of its length, some earlier roadways, vehicle and pedestrian bridges are constructed over the channel. Parts of the channel are screened by cyclone wire fences.

A number of inter-war and post-war industrial buildings are built near or along the banks of the channel. Trees and other vegetation line some banks of the channel.

Category: Utilities infrastructure - stormwater. Period: Inter-war. Materials: Brick and concrete.

Physical condition level: Good

Physical condition:
Archaeological potential level: Little

Archaeological potential Detail:

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Modification dates: Timeline of known dates for changes to the channel system:

January 1896

Upper section of Shea's Creek Canal completed, later re-named Alexandra Canal

March 1896

Next section of Shea's Creek Canal commenced but stopped in June when the works were flooded

1897

Lower section of Shea's Creek Canal commenced in March 1896 was completed and the sides pitched with stone

1897

Total of nine main drains had been constructed

26 October 1897

Tidal water allowed into Shea's Creek canal

1899

Survey of extension of Shea's Creek stormwater channel from current termination at McEvoy Street to Botany Road underway

September to December 1900

Construction of a storm water channel from McEvoy Street to Botany Road constructed using day labour

1901

Large numbers of men employed in making additions and extensions to stormwater channels at Alexandria

1901

Decision to extend stormwater channel through Alexandria to the upper end of the Shea's Creek canal

1903

Shea's Creek stormwater channel extended from Botany Road to the Quatre-Bras woolscouring works

1904

Shea's Creek stormwater channel serving districts of Newtown, Macdonaldtown, Redfern, and Alexandria and Waterloo has been extended at cost of £1300

1905

Sum of £5479/16/1 spent on stormwater channel from Botany Road to old bed of Shea's Creek

1906

Sum of £4,594/5/8 spent on extension of storm water channel to Shea's Creek

1911

Alexandria Council requested a stormwater channel to connect existing channels and Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel

1912

Stormwater channel to connect existing channels and Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel was underway using day labour

1913

Stormwater channels at Alexandrina completed at cost of £7,836 and transferred to the Water Board

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

1920

Public Works Department designing stormwater channels for Shea's Creek

6 March 1931

Doody Street stormwater channel, draining Alexandria, Mascot and Waterloo, first rated

1934

Design of Alexandria S W D 1 Doody Street Channel

Recommended management: Maintain the open channel, the path of the waterway, and its continued operation as part of the local stormwater management system.

A Heritage Assessment and Heritage Impact Statement should be prepared prior to any major works.

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

For upgrades to the stormwater system, consider alternatives to demolition or obstruction of the channel, such as through additional pipelines or detention basins.

New works should retain, expose and reflect original construction materials, such as surviving brickwork.

Encourage new development on adjacent sites to relate to the stormwater channel, enhance its setting and visibility. Minimise further obstruction or enclosure of the channel, such as through road bridges.

Do not paint previously unpainted brickwork.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

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Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Criteria a): Built in 1931-1934, the Doody Street stormwater channel, together with the other open stormwater channels draining into the Alexandria Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. The construction of this channel represents significant government initiatives to improve health and sanitation, control floods, provide work for the unemployed during the 1930s depression and support the development of industry in the area during the early twentieth century.

[Historical significance]

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the location of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of area, in particular by opening up large tracts of land for secondary industry. The number and scale of inter-war and post-war industrial buildings located alongside the open channel system demonstrate the close relationship between the construction of the channels and the industrial development of the area.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's stormwater management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The construction of this channel is associated the NSW Public Works Department and the unemployment relief schemes during the 1930s depression.

[Historical association significance]

Criteria c): Aesthetically, the open brick and concrete stormwater channel running through the heavily developed landscape of Alexandria contributes to the area's distinctive character derived from its low-lying topography and industrial history. The English bond brickwork and bullnosed coping demonstrate typical construction methods of the period. The robust masonry materials and utilitarian design relate to the surrounding inter-war and post-war industrial buildings.

[Aesthetic/Technical significance]

Criteria d): Social significance requires further study to ascertain the value of this channel to communities.

[Social/Cultural significance]

The channel may hold significance to descendants of the labourers who helped to construct the channel as part of the unemployment relief scheme during the 1930s depression.

Criteria e):
[Research significance]

Criteria f):
[Rarity]

Criteria g): The structure represents an example of an open stormwater channel from the early twentieth century.

[Representative]

It forms part of a group of stormwater channels and the canal in Alexandria which represent Sydney's stormwater management engineering of the late nineteenth and early twentieth century.

Intactness/Integrity: Highly intact

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

References:	Author	Title	Year
	RTA	Aerial Photographs of Sydney May-June 1943.	1943
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	City of Sydney	Aerial Survey of the City of Sydney	1949
	City of Sydney/ City Building Survey	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Metropolitan Water Sewerage and Drainage	Detail Sheets Series, Alexandria	1925
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria, Sydney	1890
	Higinbotham & Robinson	Waterloo Sydney	1890
	F J J Henry	The Water Supply and Sewerage and Drainage of Sydney	1939
	W V Aird	The Water Supply, Sewerage and Drainage of Sydney	1961
	Ringer, Ron	From Sheas Creek to Alexandra Canal, Dictionary of Sydney	2013
	Sydney Water	Section 170 Register entry for Johnstons Creek Stormwater Channel	
	Donald Hector	Sydney's Water Sewerage and Drainage System	2011

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage Study		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	123		DP	1019907

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	Listing Date
	City of Sydney Industrial and Warehouse Buildings	Heritage study		

Data entry: Data first entered: 05/08/2014

Data updated: 15/05/2015

Status: Completed

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: The stormwater channel between Bourke and O'Riordan Street at former Commonwealth Industrial Gases

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345ccff339f21f34cba8de2343f68dbe428.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345ccff339f21f34cba8de2343f68dbe428.JPG

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: The stormwater channel viewed from O'Riordan Street

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 05/09/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34577a88691375f4688b27fa8ebbe4e5492.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34577a88691375f4688b27fa8ebbe4e5492.jpg

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: Location of the Doody Street stormwater channel shaded in brown

Copy right: City of Sydney

Image by: City of Sydney

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345263d1b4595604259a2947b181f5a1e14.jpg>

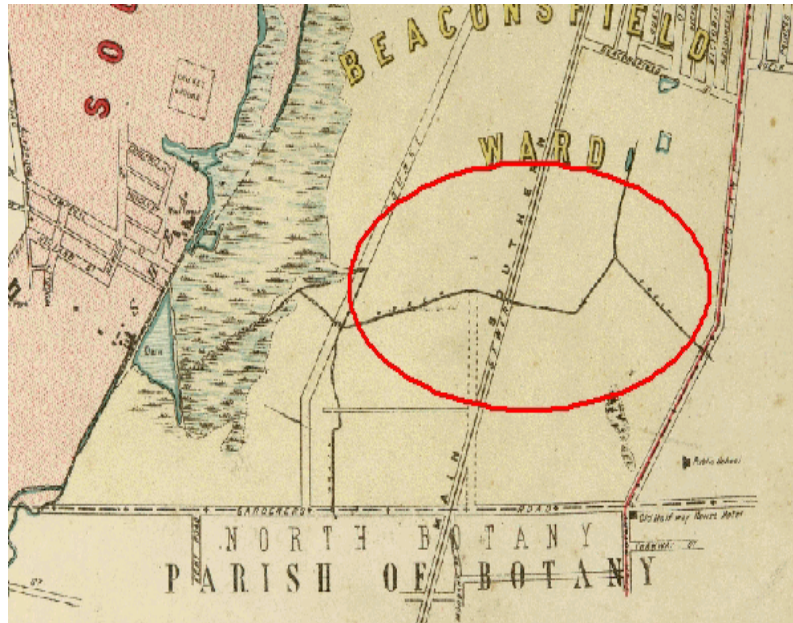
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345263d1b4595604259a2947b181f5a1e14.jpg

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: 1885-1890s map showing the precursor to the channel marked as a 'drain'

Copy right:

Image by: Highinbotham & Robinson

Image date: 01/01/1890

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3450ef991fa3aca4c3e859c07678d49f73c.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3450ef991fa3aca4c3e859c07678d49f73c.jpg

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing this channel circled and surrounding industries

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3452df7af5e00344226933086e3118b9393.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3452df7af5e00344226933086e3118b9393.jpg

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: 1949 aerial showing part of the channel to the east of Alexandra Canal and surrounding industry

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1949

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345eaf8abb537b4e4683240720f6403552.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345eaf8abb537b4e4683240720f6403552.jpg

Item name: Doody Street stormwater channel

Location: Doody Street (as marked on the map) Alexandria 2015

Sydney

Image:



Caption: Part of this channel system under construction in 1929 with Australian Iron & Steel factory behind

Copy right: City of Sydney archives (067\067305)

Image by: Sydney Water

Image date: 03/02/1929

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3450c4aaa2037d441699a9f3522b018d632.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3450c4aaa2037d441699a9f3522b018d632.jpg

Inventory 3

Item name: Macdonaldtown stormwater channel**Location:** Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney**Address:** Between Sydney Park Road & Alexandra Canal (as marked on the map)**Planning:** Sydney South**Suburb/nearest town:** Alexandria 2015**Local govt area:** Sydney**Parish:** Alexandria**State:** NSW**County:** Cumberland**Other/former names:** Sheas Creek catchment (SWMAP0063-SW_089)**Area/group/complex:****Group ID:****Aboriginal area:****Curtilage/boundary:** As described in Sydney Local Environmental Plan**Item type:** Built**Group:** Utilities - Drainage**Category:** Storm Water Drain**Owner:** State Government**Admin codes:****Code 2:****Code 3:****Current use:** Stormwater channel**Former uses:** Stormwater channel**Assessed significance:** Local**Endorsed significance:**

Statement of significance: Built in approximately 1904, Macdonaldtown stormwater channel, together with the other open stormwater channels draining into the Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. It forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer. The construction of this channel represents significant government initiatives to alleviate the City's severe public health problems, to control floods and support the development of industry in the area during the early twentieth century.

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the catchment of the former natural creek and swamp-lands which initially attracted noxious industries to the area such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of area, in particular by opening up large tracts of land for secondary industry.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's stormwater management engineering during the early twentieth century to control this natural phenomenon.

Aesthetically, the open brick and concrete stormwater channel running through the urban landscape and parkland contributes to the distinctive character of the area derived from its low-lying topography and industrial history from a time when Sydney Park was once large clay pits for major brickworks.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The Macdonaldtown stormwater channel is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Channel history:

The subject land is shown in early maps as flat, swampy and largely unoccupied, intersected by the main waterway of Shea's Creek. The creek originally ran from the former swamps of Waterloo to Cooks River and then into Botany Bay, which drained the catchment area of Waterloo, Alexandria and Erskineville.

Evidence of the early Aboriginal use of the creek was found during excavation works in 1896 which uncovered dugong bones, two stone hatchet heads and the remains of a forest in the estuarine clay below the low tide level. Close examination by the then curator of the Australian Museum, Robert Etheridge, revealed the animal had been butchered by a blunt-edged cutting or chopping instrument (Ringer 2013).

Towards the end of the nineteenth century, Sydney's intensified development, growing population and combined system for stormwater and sewerage disposal contributed to severe public health crises. Outbreaks of Enteric Fever (typhoid) plagued Sydney from the 1870s to 1890s.

In 1890 the secretary for Public Works, Bruce Smith, directed that stormwater drainage be provided for Sydney (Aird, *The Water Supply, Sewerage and Drainage of Sydney*, Sydney, 1961, p 201). Before this direction, stormwater was carried by either combined sewers or natural water courses, resulting in unsanitary public health conditions. The subsequent construction of purpose-built stormwater drains enabled stormwater drainage to be separated from the sewer (Sydney Water, *Johnstons Creek Stormwater Channel No. 55*, nd).

During the 1890s, the Public Works Department converted the lower reaches of Sheas Creek into a navigable canal (NSW, Public Works Department, *Annual Report*, 1891, p 3). Originally known as the Sheas Creek canal, it was later re-named the Alexandra Canal after Princess Alexandra, the wife of King Edward VII (Department of Public Works & Services, *Sheas Creek Woolsheds Conservation Management Plan*, 1999).

By 1896 the upper section of canal had been completed (NSW, Public Works Department, *Annual Report*, 1896, p 24). The lower section was completed in 1897 with sides pitched with stone. A concrete bed was laid at the head of the canal to allow water from Shea's Creek to enter and a total of 180 trees from the Botanic Gardens planted along its banks (NSW, Public Works Department, *Annual Report*, 1897, p 35). Tidal water was allowed into the canal on 26 October 1897 (NSW, Public Works Department, *Annual Report*, 1898, p 32). A plan to extend the canal further to the north to Buckland Street was never constructed (Department of Public Works & Services, *Sheas Creek Woolsheds Conservation Management Plan*, 1999).

This construction of the canal attracted industry to nearby land. The area however remained low-lying and swampy.

Theories of health and amenity current at the time insisted that such areas should be drained by concrete or brick-lined channels (stormwater drains) to remove excess water for health reasons. This had the useful by-product of converting land into sites suitable for industrial use.

Works to channelise the natural waterways of Sheas Creek began in approximately 1896. A network of stormwater channels were constructed in stages to drain into the Alexandra Canal, now referred to as the Sheas Creek channel to the north, the Macdonaldtown channel to the west and the Doody Street channel to the east of the canal.

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

A total of nine main drains for stormwater had been constructed by 1897 (Aird, *The Water Supply, Sewerage and Drainage of Sydney*, Sydney, 1961, p 203). It is unclear whether this included the earliest stage of the subject stormwater channels.

The Shea's Creek stormwater channels to the north of the canal were constructed in stages from approximately 1896 to 1906. The Macdonaldtown section of the channel extending west from the canal to the present Sydney Park Road (a continuation of Huntley Street) was completed in 1904. The channel to the east of the canal beside Doody Street was completed in the later period in circa 1931-1934.

In 1899 a survey was underway for an extension of the Shea's Creek stormwater channel to Botany Road from where it then terminated at McEvoy Street (NSW, Public Works Department, Annual Report, 1899, p 113). A concrete storm water channel between McEvoy Street and Botany Road was constructed using day labour between September and December 1900 (NSW, Public Works Department, Annual Report, 1901, p 122).

In 1901 Public Works records show that large numbers of men were employed to further extend the stormwater channels at Alexandria (NSW, Public Works Department, Annual Report, 1901, p 12).

In 1901 a decision was also made to extend the stormwater channel through Alexandria. This included a plan to extend the northern end of the Shea's Creek canal to connect pre-existing channels near Buckland Street and Wyndham Street, and to construct the branch towards Waterloo crossing the main southern sewer near Bourke Street (NSW, Public Works Department, Annual Report, 1901, p 122).

The Shea's Creek stormwater channel was then extended from Botany Road to the Quatre-Bras wool-scouring works near Wyndham Street in 1903 (NSW, Public Works Department, Annual Report, 1903, p 114).

In 1904 it was reported that the Shea's Creek stormwater channel serving the districts of Newtown, Macdonaldtown, Redfern, and Alexandria and Waterloo had been extended at a cost of £1,300, and a gap of 2,400 feet (731.5 metres) remained at this time between the channel and the canal (NSW, Public Works Department, Annual Report, 1904, p 11). The work involved construction of a channel along the creek from Botany Road near Grimley's tannery to the canal with a concrete base and sides of brickwork. The walls were topped with moulded concrete blocks with a bullnose profile (NSW, Public Works Department, Annual Report, 1904, p 51).

A short length of channel was constructed at Huntley Street in 1904. This appears to encompass the Macdonaldtown branch from the present Sydney Park Road (a continuation of Huntley Street) to the canal (NSW, Public Works Department, Annual Report, 1904, p 51).

A sum of £5,479 had been spent in 1905 on the stormwater channel from Botany Road to the old bed of Shea's Creek (NSW, Public Works Department, Annual Report, 1906, p 31). A further sum of £4,594 was spent in 1906 extending the storm water channel to Shea's Creek (NSW, Public Works Department, Annual Report, 1906, p 31). By 1906, the main channel running from 10 chains (201 metres) below Botany Road, which had been suspended for some years, was completed to the head of Shea's Creek canal, thereby completing the drainage system for Alexandria and Waterloo (NSW, Public Works Department, Annual Report, 1906, p 73).

The channel running almost due north to Alexandria Park was the next section to be completed. In 1911 Alexandria Council requested a stormwater channel connecting existing channels at Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel in order to complete the storm water scheme. It would be partially underground and partially an open channel measuring 58 chains long (1,167 metres) and estimated to cost £9,000 (NSW, Public Works Department, Annual Report, 1911, p 56). The work was underway using day labour the following year. The base and sides were proposed to be constructed of concrete for a length of 32.25 chains (648.8 metres). Another branch crossing McEvoy Street and running close to Botany Road near Wyndham Street was also in progress, constructed of a reinforced concrete pipe. It was described then as draining an area where many factories were being established (NSW, Public Works Department, Annual Report, 1912 p 61). The stormwater channels at Alexandria had been completed by 1913 at a cost of £7,836 and were

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

then transferred to the Water Board (NSW, Public Works Department, Annual Report, 1913, p 6, 44).

The Public Works Department designed further stormwater channels for Shea's Creek in 1920 (NSW Public Works Department, Annual Report, 1920, p 100). Between 1930 and 1935, major work occurred on expanding the stormwater drainage system when unemployment relief funds were used to construct numerous stormwater drains across Sydney (W V Aird, The Water Supply, Sewerage and Drainage of Sydney, Sydney, 1961, p 206).

The Doody Street channel was constructed in approximately 1931-34 as part of the unemployed relief programme (NSW Public Works Department, Annual Report, 1934, p 44-5). A list of stormwater drainage areas provided by F J J Henry's 1939 history of the Water Board listed the Doody Street channel, which drained Alexandria, Mascot and Waterloo, as being first rated from 6 March 1931 (F J J Henry, The Water Supply and Sewerage and Drainage of Sydney, Sydney 1939, Table opp p 25).

The construction of the purpose-built stormwater system, separate to the sewer, represented a significant advancement of the time and a major government initiative to improve the health of Sydney's inhabitants.

Following the construction of the separate sewer and stormwater systems in the 1890s, disease dramatically declined in Sydney. According to the medical advisor to the Water Board, mortality rates from diarrhoea, diphtheria and phthisis (pulmonary tuberculosis) decreased. In the Erskineville, Redfern and Waterloo districts, mortality rates from typhoid declined as much as two-thirds (Aird 1961).

Themes:	National theme	State theme	Local theme
	4. Settlement	Utilities	Stormwater channel
	3. Economy	Technology	Infrastructure
	1. Environment	Environment - naturally evolved	Stream

Designer: Public Works Department

Builder: Public Works Department

Year started: **Year completed:** 1904 **Circa:** Yes

Physical description: Built in approximately 1904, the stormwater channel comprises an open drain constructed of concrete and brick with bull-nosed coping. Part of the channel is constructed with a U-shaped cross-section in concrete.

The subject part of the stormwater channel extends to the west of Alexandra Canal, crossing under Euston and Burrows Roads and terminating at Sydney Park Road. The channel runs through the north-eastern corner of Sydney Park, formerly the NSW brickworks.

While open for most of its length, segments of the channel are enclosed, covered by concrete slabs or vehicle and pedestrian bridges.

Mature trees line the banks of the open channel, together with some industrial buildings at its eastern end.

Category: Utilities infrastructure - stormwater. Period: Federation. Materials: Brick and concrete.

Physical condition level: Good

Physical condition:
Archaeological potential level: Little

Archaeological potential Detail:

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Modification dates: Timeline of known dates for changes to the channel system:

January 1896

Upper section of Shea's Creek Canal completed, later re-named Alexandra Canal

March 1896

Next section of Shea's Creek Canal commenced but stopped in June when the works were flooded

1897

Lower section of Shea's Creek Canal commenced in March 1896 was completed and the sides pitched with stone

1897

Total of nine main drains had been constructed

26 October 1897

Tidal water allowed into Shea's Creek canal

1899

Survey of extension of Shea's Creek stormwater channel from current termination at McEvoy Street to Botany Road underway

September to December 1900

Construction of a storm water channel from McEvoy Street to Botany Road constructed using day labour

1901

Large numbers of men employed in making additions and extensions to stormwater channels at Alexandria

1901

Decision to extend stormwater channel through Alexandria to the upper end of the Shea's Creek canal

1903

Shea's Creek stormwater channel extended from Botany Road to the Quatre-Bras woolscouring works

1904

Shea's Creek stormwater channel serving districts of Newtown, Macdonaldtown, Redfern, and Alexandria and Waterloo has been extended at cost of £1300

1905

Sum of £5479/16/1 spent on stormwater channel from Botany Road to old bed of Shea's Creek

1906

Sum of £4,594/5/8 spent on extension of storm water channel to Shea's Creek

1911

Alexandria Council requested a stormwater channel to connect existing channels and Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel

1912

Stormwater channel to connect existing channels and Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel was underway using day labour

1913

Stormwater channels at Alexandrina completed at cost of £7,836 and transferred to the Water Board

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

1920

Public Works Department designing stormwater channels for Shea's Creek

6 March 1931

Doody Street stormwater channel, draining Alexandria, Mascot and Waterloo, first rated

1934

Design of Alexandria S W D 1 Doody Street Channel

Recommended management: Maintain the open channel, the path of the waterway, and its continued operation as part of the local stormwater management system.

A Heritage Assessment and Heritage Impact Statement should be prepared prior to any major works.

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

For upgrades to the stormwater system, consider alternatives to demolition or obstruction of the channel, such as through additional pipelines or detention basins.

New works should retain, expose and reflect original construction materials, such as surviving brickwork.

Encourage new development on adjacent sites to relate to the stormwater channel, enhance its setting and visibility. Minimise further obstruction or enclosure of the channel, such as through road bridges.

Do not paint previously unpainted brickwork.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Criteria a): Built in approximately 1904, Macdonaldtown stormwater channel, together with the other open stormwater channels draining into the Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. It forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer. The construction of this channel represents significant government initiatives to alleviate the City's severe public health problems, to control floods and support the development of industry in the area during the early twentieth century.

[Historical significance]

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the catchment of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of area, in particular by opening up large tracts of land for secondary industry.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's flood management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The construction of this channel is associated the NSW Public Works Department.
[Historical association significance]

Criteria c): Aesthetically, the open brick and concrete stormwater channel running through the urban landscape and parkland contributes to the distinctive character of the area derived from its low-lying topography and industrial history when Sydney Park was once large clay pits for major brickworks.
[Aesthetic/Technical significance]

Technically, the channel demonstrates flood management engineering of the early twentieth century.

Criteria d): Social significance requires further study to ascertain the value of this channel to communities.
[Social/Cultural significance]

Criteria e):
[Research significance]

Criteria f): The channel forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer.
[Rarity]

Criteria g): The structure represents an example of an open stormwater channel from the early twentieth century.
[Representative]

It forms part of a group of stormwater channels and the canal in Alexandria which represent Sydney's stormwater management engineering of the late nineteenth and early twentieth century.

Intactness/Integrity: High integrity

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	F J J Henry	The Water Supply and Sewerage and Drainage of Sydney	1939
	W V Aird	The Water Supply, Sewerage and Drainage of Sydney	1961
	Ringer, Ron	From Sheas Creek to Alexandra Canal	2013
	NSW Government	Public Works Department Annual Reports 1890-1945	
	Donald Hector	Sydney's Water Sewerage and Drainage System	2011
	Sydney Water	Section 170 Register entry for Johnstons Creek Stormwater Ch	
	City of Sydney/ City Building Survey	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Metropolitan Water Sewerage and Drainage	Detail Sheets Series: Alexandria	1925
	Town Planning Branch-City Engineers	Civic Survey 1938-1950, Alexandria West	1950

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage Study		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	1		DP	1040114
	PART LOT	1		DP	1193543
	PART LOT	2		DP	709175
	PART LOT	13		DP	1050464

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	Listing Date
	City of Sydney Industrial and Warehouse Buildings Heritage	Heritage study		

Data entry: Data first entered: 05/08/2014 Data updated: 15/05/2015 Status: Completed

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: Macdonaldtown stormwater channel viewed from Burrows Road

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 11/11/2013

Image number:

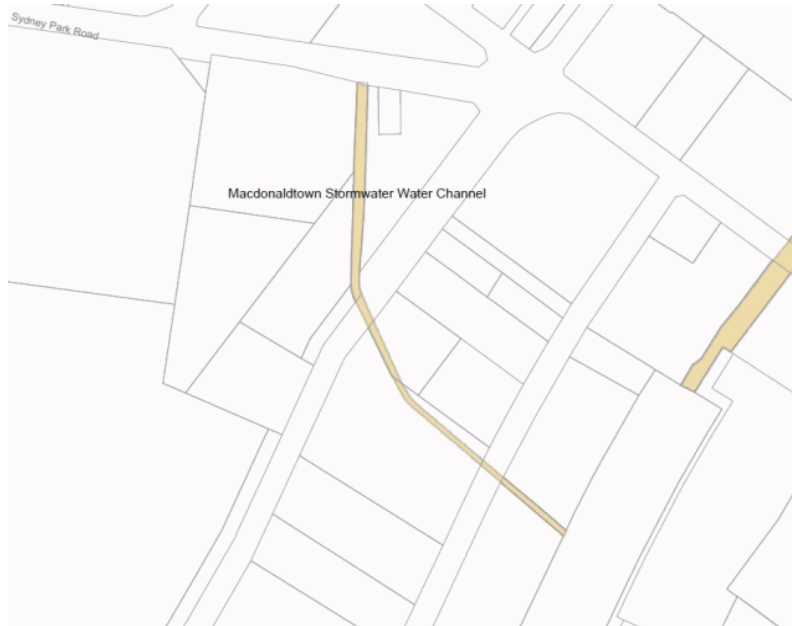
Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345ac597b297361468dbf1ca6b933ad290e.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345ac597b297361468dbf1ca6b933ad290e.jpg

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: Location of Macdonaldtown stormwater channel shaded in brown

Copy right: City of Sydney

Image by: City of Sydney

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345738d4d8a583042549b84e6faac6d6ba7.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345738d4d8a583042549b84e6faac6d6ba7.jpg

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1950 civic survey showing the clay pits from the former brickworks to the west of the channel

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1950

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345de8a07732e3c4fb49605ea840c464e2b.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/P/Thumb_test345de8a07732e3c4fb49605ea840c464e2b.jpg

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1956 detail sheet showing the channel circled and surrounding brickworks and other industries

Copy right:

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345f39a30fc1dfa4e21815fd0944fdc4eeb.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345f39a30fc1dfa4e21815fd0944fdc4eeb.jpg

Item name: Macdonaldtown stormwater channel

Location: Between Sydney Park Road & Alexandra Canal (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1949 aerial showing the channel to the west of Alexandra Canal, surrounding brickworks and industry

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1949

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3459b989435bc0d417199984757d7c3fb80.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3459b989435bc0d417199984757d7c3fb80.jpg

Inventory 4

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Address: Huntley Street, Maddox Street and Bowden Street (as marked on the map)

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish: Alexandria

State: NSW

County: Cumberland

Other/former names: Sheas Creek catchment (SWMAP0063-SW_089)

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Utilities - Drainage

Category: Storm Water Drain

Owner: State Government

Admin codes:

Code 2:

Code 3:

Current use: Stormwater channel

Former uses: Stormwater channel

Assessed significance: Local

Endorsed significance:

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Statement of significance: Built in 1896-1903, Shea's Creek stormwater channel, together with the other open stormwater channels draining into the Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. It forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer. The construction of this channel represents significant government initiatives to alleviate the city's severe public health problems, to control floods and support the development of industry in the area during the late nineteenth and early twentieth century.

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the location of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of area, in particular by opening up large tracts of land for secondary industry. The number and scale of inter-war and post-war industrial buildings located alongside the open channel system demonstrate the close relationship between the construction of the channels and the industrial development of the area.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's stormwater management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.

Aesthetically, the open brick and concrete stormwater channel running through the heavily developed landscape of Alexandria contributes to the area's distinctive character derived from its low-lying topography and industrial history. The English bond brickwork and bullnosed coping demonstrate typical construction methods of the period. The robust masonry materials and utilitarian design relate to the surrounding inter-war and post-war industrial buildings.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The Shea's Creek stormwater channel is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. It remained primarily in the hands of one owner until after the World War I.

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Channel history:

The subject land is shown in early maps as flat, swampy and largely unoccupied, intersected by the main waterway of Shea's Creek. The creek originally ran from the former swamps of Waterloo to Cooks River and then into Botany Bay, which drained the catchment area of Waterloo, Alexandria and Erskineville.

Evidence of the early Aboriginal use of the creek was found during excavation works in 1896 which uncovered dugong bones, two stone hatchet heads and the remains of a forest in the estuarine clay below the low tide level. Close examination by the then curator of the Australian Museum, Robert Etheridge, revealed the animal had been butchered by a blunt-edged cutting or chopping instrument (Ringer 2013).

Towards the end of the nineteenth century, Sydney's intensified development, growing population and combined system for stormwater and sewerage disposal contributed to severe public health crises. Outbreaks of Enteric Fever (typhoid) plagued Sydney from the 1870s to 1890s.

In 1890 the secretary for Public Works, Bruce Smith, directed that stormwater drainage be provided for Sydney (Aird, *The Water Supply, Sewerage and Drainage of Sydney*, Sydney, 1961, p 201). Before this direction, stormwater was carried by either combined sewers or natural water courses, resulting in unsanitary public health conditions. The subsequent construction of purpose-built stormwater drains enabled stormwater drainage to be separated from the sewer (Sydney Water, *Johnstons Creek Stormwater Channel No. 55*, nd).

During the 1890s the Public Works Department converted the lower reaches of Sheas Creek into a navigable canal (NSW, Public Works Department, *Annual Report*, 1891, p 3). Originally known as the Sheas Creek canal, it was later re-named the Alexandra Canal after Princess Alexandra, the wife of King Edward VII (Department of Public Works & Services, *Sheas Creek Woolsheds Conservation Management Plan*, 1999).

By 1896 the upper section of canal had been completed (NSW, Public Works Department, *Annual Report*, 1896, p 24). The lower section was completed in 1897 with sides pitched with stone. A concrete bed was laid at the head of the canal to allow water from Shea's Creek to enter and a total of 180 trees from the Botanic Gardens planted along its banks (NSW, Public Works Department, *Annual Report*, 1897, p 35). Tidal water was allowed into the canal on 26 October 1897 (NSW, Public Works Department, *Annual Report*, 1898, p 32). A plan to extend the canal further to the north to Buckland Street was never constructed (Department of Public Works & Services, *Sheas Creek Woolsheds Conservation Management Plan*, 1999).

This construction of the canal attracted industry to nearby land. The area however remained low-lying and swampy.

Theories of health and amenity current at the time insisted that such areas should be drained by concrete or brick-lined channels (stormwater drains) to remove excess water for health reasons. This had the useful by-product of converting land into sites suitable for industrial use.

Works to channelise the natural waterways of Sheas Creek began in approximately 1896. A network of stormwater channels were constructed in stages to drain into the Alexandra Canal, now referred to as the Sheas

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Creek channel to the north, the Macdonaldtown channel to the west and the Doody Street channel to the east of the canal.

A total of nine main drains for stormwater had been constructed by 1897 (Aird, *The Water Supply, Sewerage and Drainage of Sydney*, Sydney, 1961, p 203). It is unclear whether this included the earliest stage of the subject stormwater channels.

The Shea's Creek stormwater channels to the north of the canal were constructed in stages from approximately 1896 to 1906. The Macdonaldtown section of the channel extending west from the canal to the present Sydney Park Road (a continuation of Huntley Street) was completed in 1904. The channel to the east of the canal beside Doody Street was completed in the later period in circa 1931-1934.

In 1899 a survey was underway for an extension of the Shea's Creek stormwater channel to Botany Road from where it then terminated at McEvoy Street (NSW, Public Works Department, Annual Report, 1899, p 113). A concrete storm water channel between McEvoy Street and Botany Road was constructed using day labour between September and December 1900 (NSW, Public Works Department, Annual Report, 1901, p 122).

In 1901 Public Works records show that large numbers of men were employed to further extend the stormwater channels at Alexandria (NSW, Public Works Department, Annual Report, 1901, p 12).

In 1901 a decision was also made to extend the stormwater channel through Alexandria. This included a plan to extend the northern end of the Shea's Creek canal to connect pre-existing channels near Buckland Street and Wyndham Street, and to construct the branch towards Waterloo crossing the main southern sewer near Bourke Street (NSW, Public Works Department, Annual Report, 1901, p 122).

The Shea's Creek stormwater channel was then extended from Botany Road to the Quatre-Bras wool-scouring works near Wyndham Street in 1903 (NSW, Public Works Department, Annual Report, 1903, p 114).

In 1904 it was reported that the Shea's Creek stormwater channel serving the districts of Newtown, Macdonaldtown, Redfern, and Alexandria and Waterloo had been extended at a cost of £1,300, and a gap of 2,400 feet (731.5 metres) remained at this time between the channel and the canal (NSW, Public Works Department, Annual Report, 1904, p 11). The work involved construction of a channel along the creek from Botany Road near Grimley's tannery to the canal with a concrete base and sides of brickwork. The walls were topped with moulded concrete blocks with a bullnose profile (NSW, Public Works Department, Annual Report, 1904, p 51).

A short length of channel was constructed at Huntley Street in 1904. This appears to encompass the Macdonaldtown branch from the present Sydney Park Road (a continuation of Huntley Street) to the canal (NSW, Public Works Department, Annual Report, 1904, p 51).

A sum of £5,479 had been spent in 1905 on the stormwater channel from Botany Road to the old bed of Shea's Creek (NSW, Public Works Department, Annual Report, 1906, p 31). A further sum of £4,594 was spent in 1906 extending the storm water channel to Shea's Creek (NSW, Public Works Department, Annual Report, 1906, p 31). By 1906, the main channel running from 10 chains (201 metres) below Botany Road, which had been suspended for some years, was completed to the head of Shea's Creek canal, thereby completing the drainage system for Alexandria and Waterloo (NSW, Public Works Department, Annual Report, 1906, p 73).

The channel running almost due north to Alexandria Park was the next section to be completed. In 1911 Alexandria Council requested a stormwater channel connecting existing channels at Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel in order to complete the storm water scheme. It would be partially underground and partially an open channel measuring 58 chains long (1,167 metres) and estimated to cost £9,000 (NSW, Public Works Department, Annual Report, 1911, p 56). The work was underway using day labour the following year. The base and sides were proposed to be constructed of concrete for a length of 32.25 chains (648.8 metres). Another branch crossing McEvoy Street and running close to Botany Road near

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Wyndham Street was also in progress, constructed of a reinforced concrete pipe. It was described then as draining an area where many factories were being established (NSW, Public Works Department, Annual Report, 1912 p 61). The stormwater channels at Alexandria had been completed by 1913 at a cost of £7,836 and were then transferred to the Water Board (NSW, Public Works Department, Annual Report, 1913, p 6, 44).

The Public Works Department designed further stormwater channels for Shea's Creek in 1920 (NSW Public Works Department, Annual Report, 1920, p 100). Between 1930 and 1935, major work occurred on expanding the stormwater drainage system when unemployment relief funds were used to construct numerous stormwater drains across Sydney (W V Aird, The Water Supply, Sewerage and Drainage of Sydney, Sydney, 1961, p 206).

The Doody Street channel was constructed in approximately 1931-34 as part of the unemployed relief programme (NSW Public Works Department, Annual Report, 1934, p 44-5). A list of stormwater drainage areas provided by F J J Henry's 1939 history of the Water Board listed the Doody Street channel, which drained Alexandria, Mascot and Waterloo, as being first rated from 6 March 1931 (F J J Henry, The Water Supply and Sewerage and Drainage of Sydney, Sydney 1939, Table opp p 25).

The construction of the purpose-built stormwater system, separate to the sewer, represented a significant advancement of the time and a major government initiative to improve the health of Sydney's inhabitants.

Following the construction of the separate sewer and stormwater systems in the 1890s, disease dramatically declined in Sydney. According to the medical advisor to the Water Board, mortality rates from diarrhoea, diphtheria and phthisis (pulmonary tuberculosis) decreased. In the Erskineville, Redfern and Waterloo districts, mortality rates from typhoid declined as much as two-thirds (Aird 1961).

Themes: **National theme**
4. Settlement

State theme
Utilities

Local theme
Stormwater channel

Designer: Public Works Department

Builder: Public Works Department

Year started: 1896

Year completed: 1903

Circa: Yes

Physical description: Built in approximately 1896-1903, the stormwater channel comprises a mostly open drain constructed of stepped brick retaining walls with a brick or concrete base.

Following the course of former Sheas Creek, the subject part of the channel extends approximately 1.5 kilometres in three branches to the north of the Alexandra Canal, crossing under the roads of Huntley, Maddox, Bowden and Mandible Streets and the line of the sewer pipeline near Hartley Street. At its southern-most end, the channel widens where it joins the mouth of the canal. The subject sections of the stormwater channel terminate at Bowden Street, Wyndham Street and Bourke Road.

The English bond brick walls and bullnosed coping demonstrate typical construction methods of the period. The robust masonry materials and utilitarian design relate to the surrounding inter-war and post-war industrial buildings.

While open for most of its length, some earlier buildings and roadways are constructed over the channel, together with post-1960s vehicle and pedestrian bridges. Parts of the channel are screened by cyclone wire fences.

A number of inter-war and post-war industrial buildings are built near or along the banks of the channel. Trees line some the banks of the channel, in particular the southern segment between Bowden and Huntley Streets.

Category: Utilities infrastructure - stormwater. Period: Federation. Materials: Brick and concrete.

Physical condition level: Good

Physical condition:

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Archaeological potential level: Little

Archaeological potential Detail:

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Modification dates: Timeline of known dates for changes to the channel system:

January 1896

Upper section of Shea's Creek Canal completed, later re-named Alexandra Canal

March 1896

Next section of Shea's Creek Canal commenced but stopped in June when the works were flooded

1897

Lower section of Shea's Creek Canal commenced in March 1896 was completed and the sides pitched with stone

1897

Total of nine main drains had been constructed

26 October 1897

Tidal water allowed into Shea's Creek canal

1899

Survey of extension of Shea's Creek stormwater channel from current termination at McEvoy Street to Botany Road underway

September to December 1900

Construction of a storm water channel from McEvoy Street to Botany Road constructed using day labour

1901

Large numbers of men employed in making additions and extensions to stormwater channels at Alexandria

1901

Decision to extend stormwater channel through Alexandria to the upper end of the Shea's Creek canal

1903

Shea's Creek stormwater channel extended from Botany Road to the Quatre-Bras woolscouring works

1904

Shea's Creek stormwater channel serving districts of Newtown, Macdonaldtown, Redfern, and Alexandria and Waterloo has been extended at cost of £1300

1905

Sum of £5479/16/1 spent on stormwater channel from Botany Road to old bed of Shea's Creek

1906

Sum of £4,594/5/8 spent on extension of storm water channel to Shea's Creek

1911

Alexandria Council requested a stormwater channel to connect existing channels and Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel

1912

Stormwater channel to connect existing channels and Alexandria Park and Wyndham Street to the Shea's Creek stormwater channel was underway using day labour

1913

Stormwater channels at Alexandrina completed at cost of £7,836 and transferred to the Water Board

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

1920

Public Works Department designing stormwater channels for Shea's Creek

6 March 1931

Doody Street stormwater channel, draining Alexandria, Mascot and Waterloo, first rated

1934

Design of Alexandria S W D 1 Doody Street Channel

Recommended management: Maintain the open channel, the path of the waterway, and its continued operation as part of the local stormwater management system.

A Heritage Assessment and Heritage Impact Statement should be prepared prior to any major works.

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

For upgrades to the stormwater system, consider alternatives to demolition or obstruction of the channel, such as through additional pipelines or detention basins.

New works should retain, expose and reflect original construction materials, such as surviving brickwork.

Encourage new development on adjacent sites to relate to the stormwater channel, enhance its setting and visibility. Minimise further obstruction or enclosure of the channel, such as through road bridges.

Do not paint previously unpainted brickwork. Remove graffiti, where possible.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Criteria a): Built in 1896-1903, Shea's Creek stormwater channel, together with the other open stormwater channels draining into the Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. It forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer. The construction of this channel represents significant government initiatives to alleviate the city's severe public health problems at the time, to control floods and support the development of industry in the area during the late nineteenth and early twentieth century.

[Historical significance]

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the location of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of area, in particular by opening up large tracts of land for secondary industry. The number and scale of inter-war and post-war industrial buildings located alongside the open channel system demonstrate the close relationship between the construction of the channels and the industrial development of the area.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's flood management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The construction of this channel is associated the NSW Public Works Department.
[Historical association significance]

Criteria c): The open brick and concrete stormwater channel running through the heavily developed landscape of Alexandria contributes to the area's distinctive character derived from its low-lying topography and industrial history. The English bond brickwork and bullnosed coping demonstrate typical construction methods of the period. The robust masonry materials and utilitarian design relate to the surrounding inter-war and post-war industrial buildings.
[Aesthetic/Technical significance]

Criteria d): Social significance requires further study to ascertain the value of this channel to communities.
[Social/Cultural significance]

Criteria e):
[Research significance]

Criteria f): The channel forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer.
[Rarity]

Criteria g): The structure represents an example of an open stormwater channel from the late nineteenth and early twentieth century.
[Representative]

It forms part of a group of stormwater channels and the canal in Alexandria which represent Sydney's stormwater management engineering of the late nineteenth and early twentieth century.

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Intactness/Integrity: Highly intact.

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	F J J Henry	The Water Supply and Sewerage and Drainage of Sydney	1939
	W V Aird	The Water Supply, Sewerage and Drainage of Sydney	1961
	RTA	Aerial Photographs of Sydney May-June 1943.	1943
	City of Sydney	Aerial Survey of the City of Sydney	1949
	City of Sydney/ City Building Surveyors	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria Sydney	1890
	Higinbotham & Robinson	Waterloo Sydney	1890
	Metropolitan Water Sewerage and Drainage Board	Detail Sheets Series: Alexandria	1925
	NSW Government	Public Works Department Annual Reports 1890-1945	
	Ringer, Ron	From Sheas Creek to Alexandra Canal	2013
	Donald Hector	Sydney's Water Sewerage and Drainage System	2011
	Sydney Water	Section 170 Register entry for Johnstons Creek Stormwater Channel	

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage Study		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
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Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Warehouse Buildings Heritage study			

Data entry: Data first entered: 05/08/2014 Data updated: 15/05/2015 Status: Completed

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: North end of the Shea's Creek stormwater channel viewed from the eastern end of Hiles Street

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 14/02/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345f9457247a32d4b51b1bd5efb3e211ee5.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345f9457247a32d4b51b1bd5efb3e211ee5.JPG

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: Part of the channel near McCauley Street

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 14/02/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345bdf82fb24e274f64b7dd02dd24aae825.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345bdf82fb24e274f64b7dd02dd24aae825.JPG

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: Eastern branch of Sheas Creek stormwater channel viewed from Mandible Street

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3453c8abf67c9184681a947a50d25b67bd5.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3453c8abf67c9184681a947a50d25b67bd5.JPG

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: Part of the Shea's Creek stormwater channel between Maddox and Bowden Streets

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 05/09/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345af8dceaec678400d97b2cf5f71f68fa7.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345af8dceaec678400d97b2cf5f71f68fa7.jpg

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: Location of Shea's Creek stormwater channel shaded in brown

Copy right: City of Sydney

Image by: City of Sydney

Image date:

Image number:

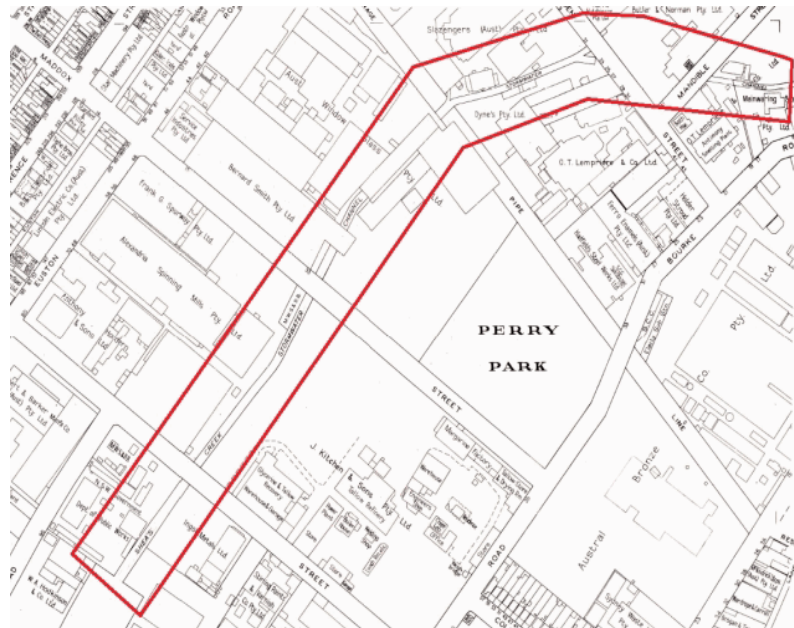
Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/345445e825131474c32972dbf06f5d3b3a1.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test345445e825131474c32972dbf06f5d3b3a1.jpg

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1956 detail sheet showing south end of the channel circled and surrounding industries

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345fe3addb3e8524bbab7aeb6b248c82500.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/P/Thumb_test345fe3addb3e8524bbab7aeb6b248c82500.jpg

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1956 detail sheet showing location of north end of the channel circled and surrounding industries

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1956

Image number:

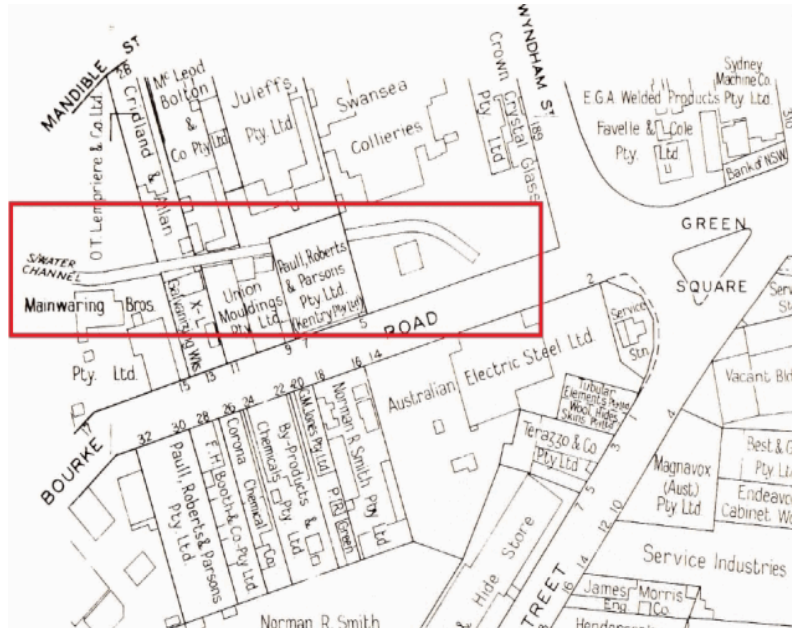
Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/34596c5c12a29c14084a4531ff385cc17b2.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test34596c5c12a29c14084a4531ff385cc17b2.jpg

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1956 detail sheet showing east branch of the channel circled and surrounding industries

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345e73f3d4b5d2c4711bf573736026bf76e.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345e73f3d4b5d2c4711bf573736026bf76e.jpg

Item name: Shea's Creek stormwater channel

Location: Huntley Street, Maddox Street and Bowden Street (as marked on the map) Alexandria 2015 Sydney

Image:



Caption: 1891 photo of 'Shea's Creek storm-water sewer' under construction from Public Works annual report

Copy right: Public Works Department

Image by: Public Works Department

Image date: 01/01/1891

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345d4bb13b059944ab7b0eb7a56cd0c1bcb.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345d4bb13b059944ab7b0eb7a56cd0c1bcb.jpg

Inventory 5

Item name: Former Walter Barr Pty Ltd factory including interiors**Location:** 2-6 Birmingham Street Alexandria 2015

Sydney

Address: 2-6 Birmingham Street**Planning:** Sydney South**Suburb/nearest town:** Alexandria 2015**Local govt area:** Sydney**Parish:** Alexandria**State:** NSW**County:** Cumberland**Other/former names:** Former AlSCO Linen Services (c1980); Baxter shop (2013)**Area/group/complex:****Group ID:****Aboriginal area:** Eora**Curtilage/boundary:** As described in Sydney Local Environmental Plan**Item type:** Built**Group:** Manufacturing and Processing**Category:** Other - Manufacturing & Processing**Owner:** Private - Individual**Admin codes:****Code 2:****Code 3:****Current use:** Retail (furniture)**Former uses:** Factory**Assessed significance:** Local**Endorsed significance:**

Statement of significance: Built in 1942 for plastic manufacturers, Walter Barr Pty Ltd, this former factory represents the industrial development of Alexandria during the mid-twentieth century. It is historically significant for its connection to the Australian manufacturing of plastic products and as evidence of this formerly widespread industry in Alexandria, which supported the manufacture of pharmaceuticals, cosmetics and alcohol. The former factory represents the development of new technology and products of the twentieth century, in particular the growing use of plastic.

Products made at this factory supplied the Australian defence forces during World War II. It is also the site of innovations in compression-moulded plastic products designed and patented by Walter Barr for new appliances of the twentieth century including meter connection boxes, ice block trays and water filters. The patented Betts Bottle Capsule, used to seal and dress alcohol bottles, were one of the products made at this factory to supply the Australian market.

The building represents a good example of a modest mid-twentieth century factory of Alexandria designed in the inter-war functionalist style. It features typical characteristics of the style including the dominant horizontal emphasis, high parapet, curved corners, decorative brickwork and engaged piers. The curved building frontage and its prominent corner site give the building landmark qualities in the local neighbourhood, where it marks the junction of two streets. The building makes an important contribution to the streetscapes of Birmingham Street and Gillespie Avenue, and is visible in the round from a number of near and distant vantage points.

The building forms one of a group of modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

The former Walter Barr Pty Ltd factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former factory is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Site history:

In 1930 the land between Gillespie Avenue and Ellis Avenue, encompassing Birmingham Street was owned by Cent. Stor. Battery Co. Ltd. before its subsequent subdivision for the land occupied by the subject factory building.

This factory was constructed for Walter Barr Pty Ltd in 1942 to manufacture plastics. During the Second World War, its output supplied the defence forces. The proprietor Walter Barr also designed and patented a number of moulded plastic products.

On 10 June 1941, the subject lots 86-90 of the Birmingham Estate (DP 19171) were transferred to Mabel Agnes Barr, the wife of Walter Barr, manufacturer of Sydney (Certificate of Title 4530 f 49). The transfer included a covenant that no hotel, spirit licence or wine licence be issued for any premises of the site and that no noxious trade be carried out on the site (CT 5264 f 83). The 1942 land valuation (of 30 June) recorded that a brick factory and office, with a concrete floor and corrugated fibro roof had been built on this site (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 44). This building was also evident on the 1943 aerial photograph (SIX LPI).

Previously, Walter Barr Pty Ltd, of Gillespie Avenue had advertised for 'plastic moulders for defence work' on 7 February 1942 (SMH, 7 Feb 1942, p 20). On 12 September 1942, the company advertised for girls aged 17 to 19 for 'defence work in modern factory' (SMH, 12 Sept 1942, p 15). The firm was also innovative. Between 1936 and 1949, Walter Barr and Walter Barr Pty Ltd applied to register new designs for meter connection boxes, ice block trays and water filters (Series A1337, National Archives of Australia).

The scale of the plant can be judged from the 1945 Workplace Survey, which showed Walter Barr Pty Ltd of Gillespie Avenue, was a plastic moulder, using electrical machinery rated at 43 horsepower. The firm employed 53 workers at this time (SRNSW 7/6847).

Ownership of the site was transferred to Walter Barr Pty Ltd on 21 November 1946 (CT 5264 f 83).

The company's shares were purchased by the International Products Limited in 1946, which held the Australian patent for the Betts Bottle Capsule used to seal and dress alcohol bottles. Walter Barr Pty Ltd would be responsible for manufacturing them in Australia.

The prospectus issued by International Products Limited indicated that Walter Barr's operations would be substantially expanded with new plant and machinery for injection-moulding and extrusion of plastic products from the raw materials of 'Saran'. The prospectus estimated that £121,322 would be spent on these new buildings, plants and machinery (SMH, 5 Oct 1946, p 5).

Saran was a new plastic of the time developed in America and Canada. It was described as a technological achievement and one of the most promising developments in the plastics industry in the 1945 report to the NSW government. A tough and strong plastic, it was used for 'gorgeous fabrics for women and the almost everlasting rattan for upholstery' and applied to moulded products of all kinds such as chemical apparatus, insulators, food handling equipment, costume jewellery, pens and pencils, pharmaceutical and cosmetic containers and lighting fixtures. Saran was also applied to extruded products including rods, tubes and commercial equipment and materials (SMH, 5 Oct 1946, p 5).

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

The 1943 and 1949 aerial photographs record the construction of the building in two stages. The northern section fronting Gillespie Avenue at No. 6 was constructed first prior to 1943 and the southern section along Birmingham Street at No. 2-4 afterwards by 1949. The southern site of No.2-4 is recorded as undeveloped land in the 1943 photo and as a building contained under three connected sawtooth roofs in 1949. (1943 and 1949 aerial photographs, SIX Land and property Information and City of Sydney)

On 12 December 1952, Walter Barr proposed to erect an additional building on the site for use as a staff dining room (Lots 86/90 Birmingham St, Street cards, NSCA). Architect Francis E Feledy appears to have designed that new building, with works valued at £3,000 (2-8 Birmingham St & Gillespie St, Street cards, NSCA).

Francis E Feledy designed a number of major factory buildings for the car manufacturing industry in southern Sydney, in particular located at Zetland on the former Victoria Park racecourse site, including buildings for Joseph Lucas, Nuffield (Australia), Olympic Tyre & Rubber Co and James N. Kirby Holdings (http://www.bmclaheritage.org.au/VP_History.html, accessed 3 October 2014). His significance to the architectural and engineering profession and car manufacturing industry was reflected by the scholarship established in his name at the University of Technology Sydney, known as the Francis E Feledy Memorial Prize. This scholarship was established by staff of the British Motor Corporation to honour Feledy's work as an architect and engineer and support the development of these professions in Australia (<https://www.uts.edu.au/future-students/scholarships/0000019541>, accessed 3 October 2014).

Later, the building was used for tool-making, a refrigeration service store, and manufacturing and packing food and groceries. On 14 July 1972, the building was purchased by Alsco Linen Service Pty Ltd, when it was converted for use as a laundry and linen services (CT 5264 f 83). On 20 March 1986, Alsco Linen Service Pty Ltd proposed to construct additional staff amenities and a new workshop area in the warehouse with works valued at \$15,000 (2-8 Birmingham St, Street cards, NSCA).

Between 1998 and 2003, aerial photos from these years indicate that the three sawtooth roofs over the southern section of the site at No.2-4 Birmingham Street was removed and replaced with a single-pitch or flat roof.

Themes:	National theme	State theme	Local theme
	3. Economy	Commerce	Warehouses
	3. Economy	Industry	Factories

Designer: Francis E Feledy (1952 addition)

Builder: Unknown

Year started: 1942

Year completed: 1952

Circa: Yes

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Physical description: The former factory was constructed for Walter Barr in two stages; in 1942 at No. 6 and extended to the south to No.2-4 in the 1950s. The building occupies a corner site at the junction of Birmingham Street and Gillespie Avenue, with no setback from either street frontage. It comprises a single-storey face brick building contained under a sawtooth roof over the northern section and a single-pitch or flat roof over the southern section, all concealed behind high parapet walls.

The building was designed in the inter-war functionalist style. It exhibits typical features of this style applied to a modest utilitarian building including the horizontally pronounced wide elevations, simple geometric massing, decorative brickwork, curved corners and projecting parapet concealing the roof structure.

Walls are constructed of face brick with regularly placed engaged piers, string courses and decorative relief brickwork along the parapet. The Gillespie Street facade is framed by projecting piers at either end, including the curved corner and western-most bay. The different shade of bricks used for the northern and southern sections of the building indicate the two main phases of construction in 1942 (north) and 1952 (southern addition). The main entrance on Gillespie Avenue is accentuated by a curved wall recess and curved concrete hood.

Vertically proportioned windows are regularly placed on the lower section of the facades. A loading dock is located on the Birmingham Street elevation.

Alterations to the building include the replacement of window frames and glass, modifications to some openings and removal of the sawtooth roof over the southern section at No. 2-4.

The roof, foundations and floor structures have not been inspected by the authors.

Category: Individual building. Style: Inter-war functionalist. Storeys: 1. Facade: Face brick. Side/Rear walls: Face brick.

Physical condition level: Good

Physical condition: Windows have been replaced and some openings modified.

Archaeological potential level: Not assessed

Archaeological potential Detail:

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Modification dates: Timeline of known dates for changes to the site:

10 June 1941

Lots 86-90 of the Birmingham Estate DP 19171 transferred to Mabel Agnes Barr, wife of Walter Barr, manufacturer of Sydney

30 June 1942

Brick factory and office, concrete floor, corrugated fibro roof located on the site

7 February 1942

Walter Barr Pty Ltd of Gillespie Avenue, advertised for 'plastic moulders for defence work'

12 September 1942

Walter Barr Pty Ltd of Alexandria advertised for girls aged 17 to 19 for 'defence work in modern factory'

1943

Northern part of building shown on aerial photo, with southern part shown as undeveloped land

1945

Workplace Survey shows Walter Barr Pty Ltd, Gillespie Avenue, as a plastic moulder, using electrical machinery with 43 horsepower and 53 employees

October 1946

Prospectus issued for International Products Limited

21 November 1946

Property transferred to Walter Barr Pty Ltd

15 December 1949

Southern section of building shown as constructed in aerial photograph

12 December 1952

Application by architect F E Feledy for new building worth £3,000

12 December 1952

Walter Barr proposed to erect an additional building to use as to staff dining room

31 August 1954

James N Kirby Manufacturing Pty Ltd proposed to use the site for toolmaking

March 1955

James N Kirby Manufacturing Pty Ltd proposed to use the site as refrigeration service store and offices

13 March 1963

Application by Holsum Products Pty Ltd to use for manufacturing and packing food and groceries

25 November 1963

Site purchased by Holsum Products Pty Ltd

29 April 1969

Site purchased by Thomas Brown and Sons Ltd

30 June 1969

Site purchased by Accident Insurance Mutual Ltd

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

8 May 1972

Alsco Linen Service applies to use as laundry and linen services

3 July 1972

Application by Alsco Linen Service Pty Ltd for additions worth \$8,000

14 July 1972

Alsco Linen Service Pty Ltd purchased the site

30 January 1979

H and C Smash Repairs Pty Ltd applied to use the site for panel beating and spray painting

25 May 1979

Application by Austragroup Industries Pty Ltd for office and warehouse

3 November 1982

Alsco Linen Service Pty Ltd proposed alterations to use as office and warehouse

1 February 1984

C Hayes applied to build additions to the warehouse measuring 95 square metres and worth \$40,000

4 April 1984

Application to use part of premises as a computer room for Australia Uniforms

3 May 1985

C Hayes applied to make alterations worth \$10,000

20 March 1986

Application by Alsco Linen Service Pty Ltd to build an additional staff amenities and a new workshop area in part of the warehouse valued at \$15,000

1998-2003 (approx)

Sawtooth roofs over southern section at No. 2-4 replaced by single-pitch or flat roof

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Recommended management: The two original stages of the building should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival and photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Face brickwork should not be rendered or painted.

Original openings, high parapet with decorative detailing, curved corners and other original or early building features should be maintained and conserved.

Future development of the site should consider reinstating window frames and untinted glass more consistent with the functionalist building design.

Consider new uses for the building that will re-use and expose its industrial features to retain its former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): Built in 1942 for plastic manufacturers, Walter Barr Pty Ltd, this former factory represents the industrial development of Alexandria during the mid-twentieth century. It is historically significant for its connection to the Australian manufacturing of plastic products and as evidence of this formerly widespread industry in Alexandria, which supported the manufacture of pharmaceuticals, cosmetics and alcohol. The factory represents the development of new technology and products of the twentieth century, in particular the growing use of plastic.

[Historical significance]

Products made at this factory supplied the Australian defence forces during World War II. It is also the site of innovations in compression-moulded plastic products designed and patented by Walter Barr for new appliances of the twentieth century including meter connection boxes, ice block trays and water filters. The patented Betts Bottle Capsule, used to seal and dress alcohol bottles, were one of the products made at this factory to supply the Australian market.

The building forms one of a group of modest industrial buildings on Birmingham Street from the inter-war and post-war periods. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

The former Walter Barr Pty Ltd factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Criteria b): The building has significant associations with the plastic moulding factory of Walter Barr Pty Ltd, which supplied the Australian defence forces during World War II. Walter Barr designed and patented a number of plastic products at this factory for twentieth century technology and appliances, including the patented Betts Bottle Capsule for alcohol bottles, amongst other pharmaceutical and cosmetic products made at this factory for the Australian market.

The building design, at least in part, is associated with the noted architect Francis E Feledy, who designed a number of major factory buildings for the car manufacturing industry in southern Sydney, including buildings for Joseph Lucas, Nuffield (Australia), Olympic Tyre & Rubber Co and James N. Kirby Holdings, all located in Zetland on the former Victoria Park racecourse. A scholarship to honour Feledy's work as an architect and engineer was established by staff of the British Motor Corporation at the University of Technology Sydney, known as the Francis E Feledy Memorial Prize.

Criteria c): The building represents a good example of a modest mid-twentieth century factory of Alexandria designed in the inter-war functionalist style. It features typical characteristics of the style including the dominant horizontal emphasis, high parapet, curved corner element, decorative brickwork and engaged piers.

[Aesthetic/ Technical significance] The curved building frontage and its prominent corner site give the building landmark qualities in the local neighbourhood, where it marks the junction of two streets. The building makes an important contribution to the streetscapes of Birmingham Street and Gillespie Avenue, and is visible in the round from a number of near and distant vantage points.

The building forms one of a group of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character.

Criteria d): Social significance requires further study to ascertain its value to communities. Its landmark qualities in the local neighbourhood may have value to residents and workers as a point of reference and connection to the industrial past of Alexandria.

Criteria e):
[Research significance]

Criteria f):
[Rarity]

Criteria g): The building represents a good example of a modest mid-twentieth century factory of Alexandria designed in the inter-war functionalist style, exhibiting typical features of this style.

[Representative]

Intactness/Integrity: The building is relatively intact externally.

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	RTA	Aerial Photographs of Sydney May-June 1943.	1943
	City of Sydney/ City Building Surveyors	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria, Sydney	1890
	SSMC Heritage Photographic Survey	Brick industrial premises at corner Gillespie Avenue	1977
	The Argus, Melbourne	New Issue by Sydney Plastic Company	1946

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage	!	2014

Item name: Former Walter Barr Pty Ltd factory including interiors**Location:** 2-6 Birmingham Street Alexandria 2015

Sydney

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	89		DP	19171
	LOT	88		DP	19171

Latitude:**Longitude:****Location validity:****Spatial accuracy:****Map name:****Map scale:****AMG zone:****Easting:****Northing:**

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Ware	Heritage study		

Data entry: Data first entered: 23/07/2014

Data updated: 12/05/2015

Status: Completed

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Corner and Gillespie Avenue elevations of the former factory

Copy right: City of Sydney

Image by: City Plan Heritage

Image date: 29/08/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3451994025db6ec45319da5dfc57b56c251.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3451994025db6ec45319da5dfc57b56c251.jpg

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Birmingham Street elevation at northern end

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a0fc6c2a076348f490d93f337b3640d3.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a0fc6c2a076348f490d93f337b3640d3.JPG

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: South section of Birmingham Street elevation

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34590c5853a50274b58afc85400a26f692b.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34590c5853a50274b58afc85400a26f692b.JPG

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Detail of building corner

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34562c2f396453a4378a52bd0440c5db7d2.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34562c2f396453a4378a52bd0440c5db7d2.JPG

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1977 phototraph of the building showing the original window frames

Copy right: City of Sydney archives

Image by: SSMC Heritage Photographic Survey

Image date: 01/01/1977

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34501349e8c4a454261b32bdf0b6e67535.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34501349e8c4a454261b32bdf0b6e67535.jpg

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1928 subdivision plan of the opposite Birmingham Estate "the hub of industrial activity"

Copy right: State Library of NSW

Image by: State Library of NSW, a9617005

Image date: 08/12/1928

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/34560f3fdf6110f4e31bd6fb4e8ea2a700b.jpg>

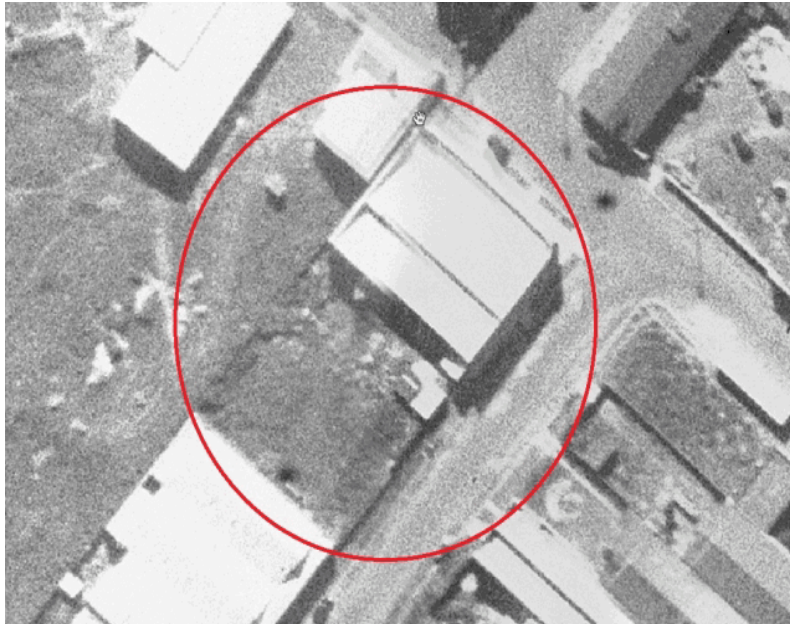
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test34560f3fdf6110f4e31bd6fb4e8ea2a700b.jpg

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1943 aerial photo of the site, showing the northern section constructed

Copy right: Land & Property Information

Image by: SIX aerial photo, LPI

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345dea7aa3645ad4cffa79fe9b8f63fbb50.jpg>

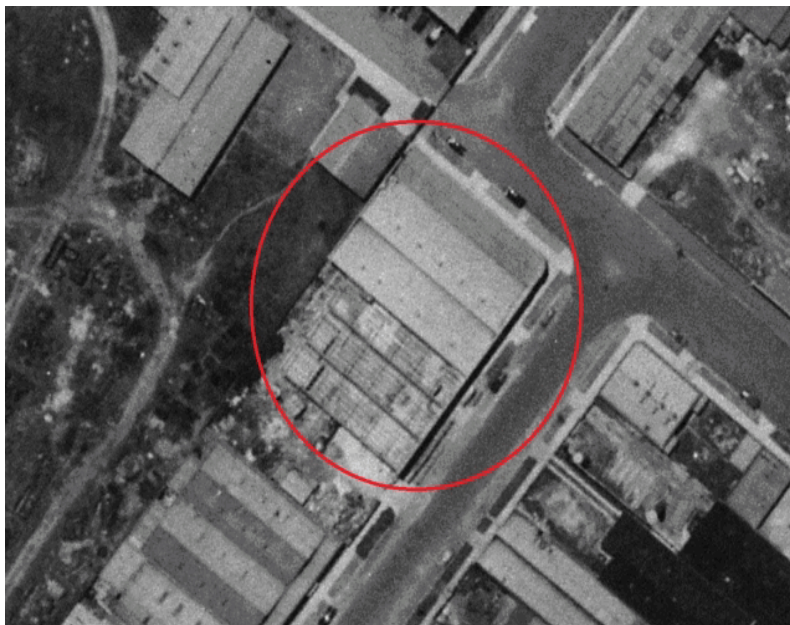
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345dea7aa3645ad4cffa79fe9b8f63fbb50.jpg

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1949 aerial showing the constructed southern section under its original sawtooth roof

Copy right: City of Sydney

Image by: City of Sydney

Image date: 15/12/1949

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345433eba3b69c741ba84c2bd4a9c284180.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345433eba3b69c741ba84c2bd4a9c284180.jpg

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing the subject site and surrounding industries

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345194a4b1296c345de84beca84030fbeb5.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345194a4b1296c345de84beca84030fbeb5.jpg

Item name: Former Walter Barr Pty Ltd factory including interiors

Location: 2-6 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Walter Barr at work in 1958 laying their moulded plastic pipe across Berowra Creek at Berowra Waters

Copy right: State Library of NSW

Image by: Jack Hickson (Australian Photographic Agency - 04744)

Image date: 04/02/1958

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3458d613c19249d4332802d4045e124c3ad.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3458d613c19249d4332802d4045e124c3ad.jpg

Inventory 6

Item name: Former Sil-Ora Dental Products factory including interiors**Location:** 22-30 Birmingham Street Alexandria 2015

Sydney

Address: 22-30 Birmingham Street**Planning:** Sydney South**Suburb/nearest town:** Alexandria 2015**Local govt area:** Sydney**Parish:** Alexandria**State:** NSW**County:** Cumberland**Other/former names:** Ainsworth Dental Company, Ainsworth Consolidated industries Pty Ltd (Aristocrat technologies)**Area/group/complex:****Group ID:****Aboriginal area:** Eora**Curtilage/boundary:** As described in Sydney Local Environmental Plan**Item type:** Built**Group:** Manufacturing and Processing**Category:** Other - Manufacturing & Processing**Owner:** Private - Individual**Admin codes:****Code 2:****Code 3:****Current use:** Commercial**Former uses:** Factory, warehouse**Assessed significance:** Local**Endorsed significance:**

Statement of significance: Built in 1945-58 for dental product and poker machine manufacturers, Sil-Ora Dental Products and Ainsworth Dental Company, this former factory represents the industrial development of Alexandria during the mid-twentieth century. The building is historically significant for its connection to the Australian manufacturing of dental products and poker machines from the period when poker machines were first legalised in Australia. The factory represents the development of new technology and products of the twentieth century, in particular for dental products and poker machines.

The former factory has significant associations with one of the largest poker machine manufacturers in the world, the Ainsworth Company and its earlier formations from the 1940s-1970s, and consequently the Ainsworth 'gaming machines' sold throughout Australia and exported overseas.

With its two main stages of construction from 1945-48 and 1958, the building represents a good example of a modest factory of Alexandria designed in the post-war functionalist style. It features typical architectural elements of this style applied to a utilitarian building, including face brick facades with horizontal projecting brick bands, decorative brickwork, horizontally-proportioned windows, and stepped parapet containing the original signage panel. The irregular building form marks the bend in Birmingham Street and gives the building added prominence in the streetscape similar to a corner building. As such, the building makes an important contribution to the streetscape of Birmingham Street.

The building forms one of a group of modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

The factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Former Sil-Ora Dental Products factory is of local heritage significance in terms of its historical, aesthetic, and representative values.

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

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were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Gaming machine history:

Because the use of gaming machines was illegal until 1956, the early history of the Australian poker machine industry is shrouded in mystery. In 1941 a police census found hundreds of illegal gaming machines in use in Sydney clubs. The machines were tolerated to such an extent that at least four manufacturers were active in Sydney before 1956.

Nutt & Muddle was the first major Australian manufacturer of gaming machines. In 1936 Roy Nutt, a salesman for Starkey's Soft Drinks and president of the Commercial Travellers Club, purchased about 50 pinball machines and leased them to milk bars and cafes. Nutt formed Nutt & Muddle with his friend Sid Muddle, who made an agreement with the Streets ice cream company to secure contracts with milk bars interested in Streets ice cream and Nutt & Muddle pinballs.

During World War II, Nutt & Muddle acquired and leased further machines, including several which had been confiscated by the NSW police, plus a large number of machines imported by the US Army.

In 1946, Nutt & Muddle manufactured its first 'Jubilee' machine, a copy of the Mills Chrome Bell. By this time the NSW Police was tolerating an increasing number of machines in clubs, while in 1950 Reg Ansett opened the Hayman Island resort which featured a casino. Nutt & Muddle supplied and serviced the casino's poker machines.

Other early poker machine manufactures in Australia included two short-lived companies: Charles Shelley Pty Ltd, which patented and made gaming machines during the 1940s, and became inactive by 1950 and Apex Amusement Company from approximately 1950. The Ainsworth Dental Company (Aristocrat) which began production in about 1952.

Nineteen-fifties gaming machines employed essentially the playing mechanism introduced by the Mills and Jennings companies in approximately 1930. During the 1960s, electro-mechanical machines appeared, the first major change in the functioning of poker machines since the 1930s. These machines were early examples of the electro-mechanical genre which dominated the industry prior to the introduction of video machines during the 1980s.

During the 1960s the American company Bally introduced the first electro-mechanical machines and promoted these aggressively in Australia. Competition in the industry was intense yet Jubilee and Aristocrat machines remained the most popular machines in Australian clubs. At this time Jubilee held about 45 per cent of the Australian market and was exporting machines to the UK.

In 1980, Aristocrat's Len Ainsworth launched a hostile takeover of Nutt & Muddle. The bid's eventual success in 1985 gave Aristocrat almost 90 per cent of the Australian market. However Ainsworth was arrested by the NSW police and charged with dishonestly conspiring to gain a monopoly of the industry. Federal regulatory authorities also investigated the takeover, which resulted in decades of inconclusive legal battles. The Jubilee name disappeared from clubs after 1985.

(Charles Pickett, Powerhouse Museum, Poker machine, 'Jubilee', 1970-1980, <http://from.ph/377730>, accessed 12 May 2015)

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

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Site history:

In 1930 the land between Gillespie Avenue and Ellis Avenue, encompassing Birmingham Street was owned by Cent. Stor. Battery Co. Ltd. before it was subsequently subdivided for the present land parcel occupied by the former factory.

Originally constructed to manufacture dental supplies, from about 1955 this factory manufactured 'gaming machines', more commonly known as poker machines, for the Ainsworth company. These machines were sold throughout Australia and were also exported overseas. Ainsworth became one of the largest poker machine manufacturers in the world.

In 1943, there were no buildings on the site; only air-raid trenches which may have been associated with the Bradford Kendall foundry which extended into lot 76. Bradford Kendall was involved in manufacturing the Australian Cruiser tank for World War II (1943 aerial photo, LPI SIX).

Lots 76 to 79 of the Birmingham Estate were purchased by Harold Hastings Ainsworth, dental surgeon of Bexley on 4 July 1944 (CT 4530 f 49). A covenant on the sale transfer specified that no noxious trade could be conducted on the site (Certificate of Title 5444 f 233).

A factory was under construction on 23 February 1945 when the land was valued (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 40).

The 1945 Workplaces survey recorded that Sil-Ora Dental Products located at 22-6 Birmingham Street manufactured 'dental supplies' using electrical machinery with seven and half horsepower. At this time, the factory employed eight workers (SRNSW 7/6847).

The factory was listed as complete by 8 March 1948 (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 40). The 1949 aerial photo showed the main building on lots 78 and 79 with a smaller building on lot 77 in the bend in the street.

Harold Hastings Ainsworth died on 25 August 1952. Numerous applications to extend the buildings followed in the 1950s and 1960s. On 27 May 1954, the Ainsworth Dental Company proposed extensions with works valued at £2,000 (22-30 Birmingham St COS Street cards).

On the night of 19 November 1954, a home-made bomb containing sticks of gelignite ignited electrically was thrown onto the roof of Sil-ora Dental Products at Birmingham Street. The bomb only partly exploded according to newspaper reports of the time, causing major damage to the roof. The proprietor then valued the factory and contents at £70,000 (SMH, 20 Nov 1952, p 1).

The company, Ainsworth Investments Pty Ltd was registered on 20 March 1956 (ASIC Company names search, 27 Aug 2014). The factory was purchased by this company on 1 July 1956 (CT 5444 f 233). Leonard Hastings Ainsworth was the effective owner of the property.

In approximately 1955, Leonard Hastings Ainsworth began manufacturing gaming machines (<http://www.ainsworth.com.au/about-ainsworth/directors>, accessed 27/8/2014). Leonard Hastings Ainsworth founded Aristocrat technologies in 1953, a major poker machine manufacturer.

On 9 January 1958, Ainsworth Dental Company proposed to extend the factory over the whole site. These works were estimated to be worth £30,000 (22-30 Birmingham St COS Street cards).

On 18 February 1960, Ainsworth Consolidated Industries Pty Ltd applied to use the former dental factory for light engineering, presumably to manufacture parts for gaming machines (22-30 Birmingham St COS Street cards).

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

On 17 January 1963, Holsum Products applied to use the building for manufacturing and packing groceries and foods (22-30 Birmingham St COS Street cards).

Thereafter, the premises was used for a range of different purposes. Notably, on 10 April 1975, Ainsworth Consolidated industries applied to use the site to manufacture, repair and assemble poker machines (22-30 Birmingham St COS Street cards).

Themes: **National theme**
3. Economy

State theme
Industry

Local theme
Factories

Designer: Unknown

Builder: Unknown

Year started: 1945

Year completed: 1958

Circa: Yes

Physical description: The building was constructed in 1945-1948 and extended in the 1950s for Sil-Ora Dental Products. It comprises a single storey building constructed of face brick walls, constructed in two sections, contained under sawtooth and gabled roofs.

The eastern section dating from 1945-48, is contained under a sawtooth roof with curved corners. The later western dating approximately 1958, follows the bend in the road, is contained under two gabled roofs with raised roof lights. The irregular building form follows and marks the bend in Birmingham Street, reflecting the historic street and subdivision pattern and giving the building added prominence in the streetscape similar to a corner building.

The building is designed in the post-war functionalist style. It exhibits typical features of this style applied to a modest utilitarian building including face brick facades with horizontal projecting brick bands, decorative brickwork, horizontally-proportioned windows, and stepped parapet containing the original signage panel. Walls contain horizontally-proportioned, metal-framed windows and original entrances.

Changes in the colour of brickwork and other details mark the different stages of the building's construction, as do design details, including the curved corner of the eastern section at the junction with the western extension. A square hood covers the entrance to the western section, while a curved hood shelters the entrance to the earlier eastern section. Both entrances feature stepped recesses. The later western section also incorporates a more decorative stepped profile for its parapet wall and two large vehicle entrances.

The small building setback along the south-eastern elevation provides a small area of landscaping, edged by a low bull-nosed brick wall, which reinforces the curved corners of the building.

Internally, the roof, foundations and floor structures have not been inspected by the authors.

Category: Individual building. Style: Post-war functionalist. Storeys: 1. Facade: Face brick. Side/rear walls: Face brick.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Item name: Former Sil-Oral Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Modification dates: Timeline of known dates for changes to the site:

1943

Aerial photo shows no buildings on site, and some trenches likely for the Bradford Kendall foundry to the north

4 July 1944

Transfer of lots 76 to 79 of the Birmingham Estate DP 19171 to Harold Hastings Ainsworth, dental surgeon of Bexley

23 February 1945

Factory under construction on lots 76-79

1945

Workplace Survey records Sil-oral Dental Products at 22-26 Birmingham Street manufactured 'dental supplies' using electrical machinery with seven and half horsepower and had eight employees

8 March 1948

Factory complete

1949

Aerial photo shows main building on lots 78 and 79 with a smaller earlier building on lot 77 on the bend in the street

7 July 1953

Application by L H Ainsworth for laboratory and store worth £150

8 July 1953

Application by L H Ainsworth for Sil-oral Dental Products to erect new laboratory and store

27 May 1954

DA by Ainsworth Dental Company for extension to factory worth £2,000

19 November 1954

Home-made bomb destroys the roof

19 September 1955

Application by Ainsworth Dental Company for steel shelter to factory worth £100

1955 (circa)

Leonard Hastings Ainsworth commenced manufacturing gaming machines on this site

31 January 1956

Application by Ainsworth Dental Company to extend the factory

9 February 1956

After death of Harold Hastings Ainsworth, property passed to Karl Ainsworth Hohnen, Lindfield, bank officer and Phyllis Elizabeth Vinson, wife of Samuel John Vinson, carrier of Coogee

20 March 1956

Ainsworth Investments Pty Ltd registered

1 July 1956

Property purchased by Ainsworth Investments Pty Ltd

Item name: Former Sil-Oral Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

9 January 1958

Application by Ainsworth Dental Company for extension of factory over whole site worth £30,000

7 April 1960

Ainsworth Dental Co Pty Ltd erected temporary office without approval

18 February 1960

Ainsworth Consolidated industries Pty Ltd applied to use the building for light engineering

17 January 1963

Application by Holsum Products to use the building for manufacturing and packing groceries and foods

2 August 1963

Application by Henry Berry and Company (Australasia) Ltd for alterations worth £2,000

8 August 1963

Leased to Henry Berry and Company (Australasia) Ltd

3 July 1963

Application by Henry Berry and Company (Australasia) Ltd to use the building as a warehouse

10 April 1975

Application by Ainsworth Consolidated industries to use the building to manufacture, repair and assemble poker machines

23 June 1980

Application by Mirko Standjevic to use the building as a warehouse to store secondhand clothing and rags

20 July 1984

Application to use the building as a warehouse to store greeting cards

Recommended management: The building should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Face brick finishes should not be painted or rendered.

Original or early metal-framed windows, decorative relief brickwork, parapet wall, entrance surrounds, signage panel and other original or early building features from the two stages of construction should be maintained and conserved.

Consider new uses for the building that will re-use and expose its industrial features to retain its former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): Built in 1945-58 for dental product and poker machine manufacturers, Sil-Ora Dental Products and Ainsworth Dental Company, this former factory represents the industrial development of Alexandria during the mid-twentieth century. The building is historically significant for its connection to the Australian manufacturing of dental products and poker machines from the period when poker machines were first legalised in Australia. The factory represents the development of new technology and products of the twentieth century, in particular for dental products and poker machines.

[Historical significance]

The building forms one of a group of modest industrial buildings on Birmingham Street from the inter-war and post-war period. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

The factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The former factory has significant associations with one of the largest poker machine manufacturers in the world, the Ainsworth Company and its earlier formations from the 1940s-1970s, and consequently the Ainsworth 'gaming machines' sold throughout Australia and exported overseas.

[Historical association significance]

Criteria c): With its two main stages of construction from 1945-48 and 1958, the building represents a good example of a modest factory of Alexandria designed in the post-war functionalist style. It features typical architectural elements of this style applied to a utilitarian building, including face brick facades with horizontal projecting brick bands, decorative brickwork, horizontally-proportioned windows and stepped parapet.

[Aesthetic/Technical significance]

The irregular building form marks the bend in Birmingham Street and gives the building added prominence in the streetscape similar to a corner building. As such, the building makes an important contribution to the streetscape of Birmingham Street.

The building forms one of a group of modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

Criteria d): Social significance requires further study to ascertain its value to communities. The building may have value to the community of former workers from Sil-Ora Dental Products and the Ainsworth Dental Company.

[Social/Cultural significance]

Criteria e):
[Research significance]

Criteria f):
[Rarity]

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Criteria g): 22-30 Birmingham Street is a representative example of a modest post-war functionalist style factories featuring typical architectural elements of the style.
[Representative]

The building represents one of a group of modest industrial buildings on Birmingham Street from the inter-war and post-war periods.

Intactness/Integrity: Intact externally.

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	Charles Pickett, Curator, Powerhouse Museum	Poker machine, 'Jubilee', 1970-1980, statement of significance	
	RTA	Aerial Photographs of Sydney May-June 1943.	1943
	City of Sydney	Aerial Survey of the City of Sydney	1949
	City of Sydney/ City Building Surveyors	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in Sydney	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria, Sydney	1890

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage Study		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
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Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	Listing Date
	City of Sydney Industrial and Warehouse Buildings Heritage study			

Data entry: Data first entered: 05/08/2014

Data updated: 12/05/2015

Status: Completed

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: South-eastern elevation showing the entrance and stepped parapet of western section

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3450398a20774ce4530aecdfdbdaeb188ac.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3450398a20774ce4530aecdfdbdaeb188ac.JPG

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Southern and part of south-eastern elevations on the bend of Birmingham Street

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3453c2546ed8f83498f9e857ce0209af8f2.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3453c2546ed8f83498f9e857ce0209af8f2.JPG

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Junction between eastern (right) and western sections (left) and entrance on south-eastern elevation

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34548ff7788d5eb41c5b8d80231cec30011.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34548ff7788d5eb41c5b8d80231cec30011.JPG

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Western end of southern elevation, viewed from the west on Birmingham Street

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34545c94248dd51411fba8a62b120512fb9.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34545c94248dd51411fba8a62b120512fb9.JPG

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Curved detail of the north-eastern corner at the eastern end of the building on Birmingham Street

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a8cfac0d6f9a4fc6977fa1dd14890fba.JPG>

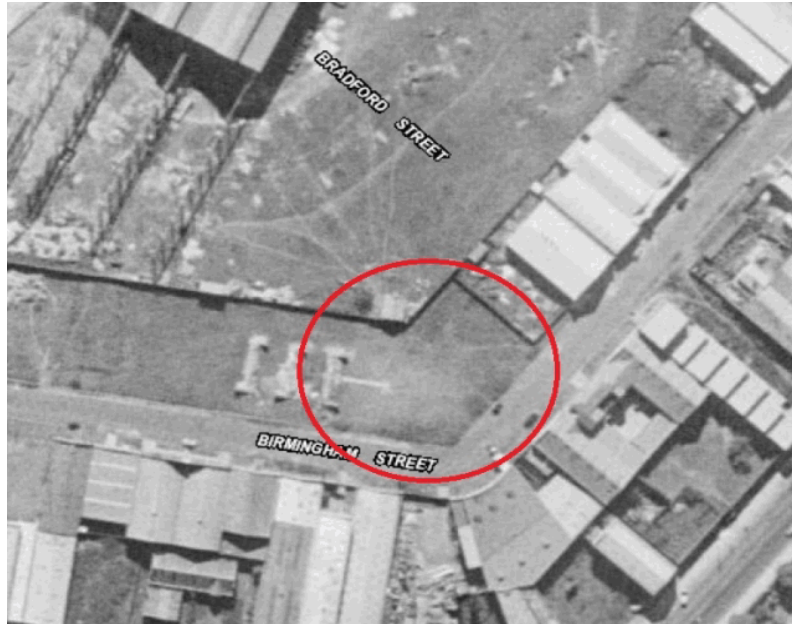
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a8cfac0d6f9a4fc6977fa1dd14890fba.JPG

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1943 aerial showing the subject site vacant at this time with World War II trenches

Copy right: NSW Land and Property Information, SIX

Image by: SIX aerial photo, LPI

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3452461c8e3281a4b6995769f5c3b870dc5.jpg>

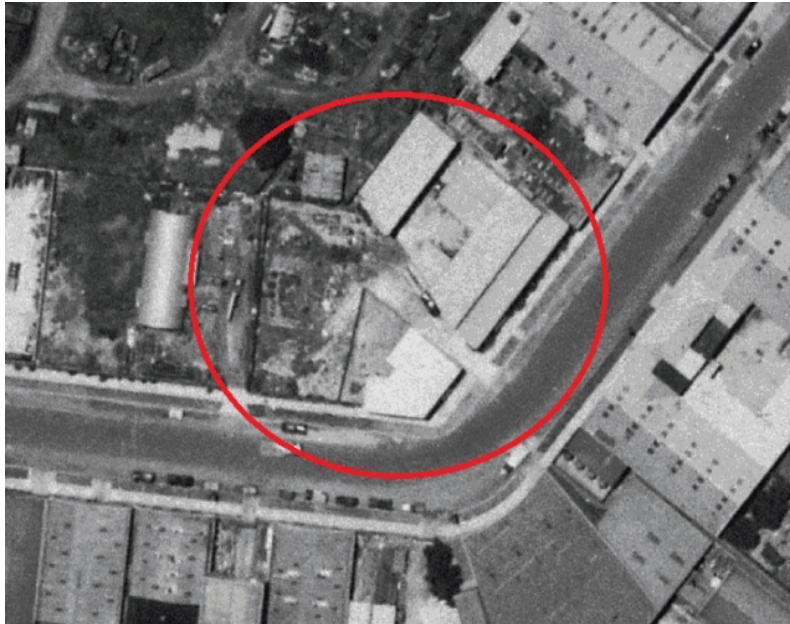
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3452461c8e3281a4b6995769f5c3b870dc5.jpg

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1949 aerial showing the constructed eastern building and before the western stage was constructed

Copy right: City of Sydney

Image by: City of Sydney

Image date: 15/12/1949

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455531a3aa7e5b449abc9bcc3b04d873ba.jpg>

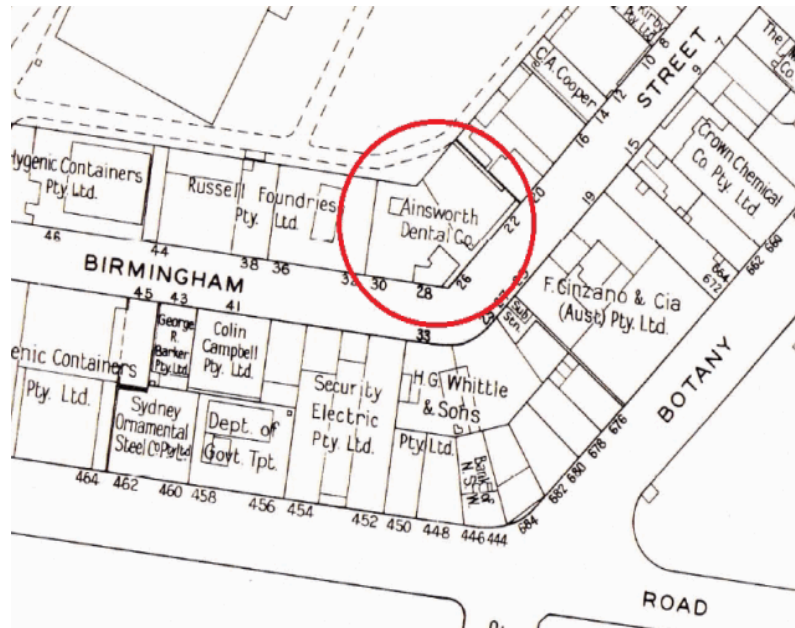
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3455531a3aa7e5b449abc9bcc3b04d873ba.jpg

Item name: Former Sil-Ora Dental Products factory including interiors

Location: 22-30 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing the subject building and surrounding industries

Copy right: City of Sydney Archives

Image by: City Building Surveyors Department, City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345187f08047d0742d5b9c997eaacd854e6.png>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345187f08047d0742d5b9c997eaacd854e6.png

Inventory 7

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Address: 27 Birmingham Street

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

State: NSW

Parish: Alexandria

County: Cumberland

Other/former names:

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Utilities - Electricity

Category: Electricity Transformer/Substation

Owner: State Government

Admin codes:

Code 2:

Code 3:

Current use: Electricity substation

Former uses: Electricity substation

Assessed significance: Local

Endorsed significance:

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Statement of significance: Built in 1932, Electricity Substation No. 375 represents a surviving example of the original network of more than 360 substations built by Sydney Municipal Council from 1904 to 1936, which first supplied electricity to Sydney's industries and houses. The period and location of the substation records the expansion of Sydney's electricity network and the growth of electricity use in Alexandria. The building also marks the major changes electricity brought for Alexandria's growth, development and population.

Aesthetically, the building demonstrates the characteristic modest form, quality of design and construction for Sydney's substations, which were designed to a higher standard than required for their function in order to integrate into their established urban contexts by reflecting neighbouring architecture or popular styles of the time.

Electricity Substation No.375 represents a good example of an unusually well-detailed, purpose-designed and built substation from the inter-war period. It demonstrates typical characteristics of the Art Deco style applied to a utilitarian building including the heavy geometric massing, roof form concealed behind a parapet wall, contrasting decorative face brickwork, simple surfaces, stepped skyline, emphatic entrance, stepped ornamental brickwork surrounding the entrance and string courses along the parapet wall. The building contributes to the streetscape and is a significant example of civic architecture in the area.

The substation also represents an early surviving example of the industrial development of Birmingham Street built shortly after the land was subdivided, which pre-dates the buildings on the opposite side of the street. The building forms one of a group of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

Electricity Substation No. 375 forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Electricity Substation No. 375 and the other surviving substations demonstrate the fundamental role that electricity played in powering Australia's industrialisation and how technological innovations of the time, specifically electricity, defined Sydney's industrial development during the twentieth century. Often constructed to service the high energy demands of factories in the near vicinity, the number, concentration and location of substations provide markers of twentieth century industrial centres and factories in the way that chimney stacks mark the location of factories predating electricity.

The larger number of substations in Alexandria demonstrates its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity. Alexandria's Birmingham Road was almost exclusively occupied by industries from the inter-war and post-war periods.

Electricity Substation No.375 is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Substations history:

One of the major innovations in industry during the nineteenth century was the development of electricity as a power and lighting source, which rivalled and then replaced water and steam power. The mills and workshops of the earlier Industrial Revolution in Britain and North America were mainly water and steam powered, whereas Australia's twentieth century industrial buildings were powered by electricity.

As part of supplying electricity to Sydney's houses and industries for the first time, Sydney Council built Sydney's first power stations and substations during the first half of the twentieth century. Sydney Council, then known as Sydney Municipal Council or the Municipal Council of Sydney, was charged with supplying electricity to Sydney city and surrounding areas in 1896 through the law named the Municipal Council of Sydney Electric Lighting Bill passed on 16th October 1896. Electricity supply was managed through the council's department known by a number of names: the Electric Lighting Committee, the Electric Light Department and the Electricity Department from 1920 to 1935. From 1936 the electricity undertaking was named Sydney County Council when it was reformed as a separate authority as a result of the Gas & Electricity Act of 1935. The various names for the council and subsequent electrical authority are recorded in the initials and building names inscribed in substation facades.

Sydney's first power station at Pyrmont began operating in 1904. The large network of substations were constructed in strategic locations to supply power from these power stations to individual customers and other electricity networks. Their specific purpose was to house machinery to convert high voltage electricity for industrial or domestic use. Substations were often erected in close proximity to factories to service their high energy demands. Consequently the number, concentration and location of substations provide markers of twentieth-century factories and industrial centres in the way that chimney stacks marked factories pre-dating electricity.

Alexandria demonstrates this pattern with its larger number of substations reflecting its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity. Alexandria's Birmingham Street was almost exclusively occupied by industries from the inter-war and post-war periods.

The period and location of surviving substations record the progressive extension of Sydney's electrical network from the centre of Sydney to surrounding areas, the scale and importance of this network, and the fundamental changes electricity brought for Sydney's growth, development and society. Sydney Municipal Council built its first substations at Town Hall, Taylor Square, Woolloomooloo and Ultimo, followed by Glebe, Newtown, Camperdown and surrounding areas. From 1904 to 1935, Sydney Council built more than 360 substations and almost 400 pole transformers throughout Sydney and surrounding suburbs. More continued to be built in the following decades. The Energy Australia (AusGrid) heritage and conservation register records that 33 of the surviving substations are located within the City of Sydney. This number excludes those no longer owned or operated by the electricity supplier.

Each substation has its own number inscribed on the building facade, which reflects its role in the broader electrical network and generally the total number, sequence and period of construction, with some exceptions where disused numbers were reallocated. Most substations were constructed in established urban areas on a small portion of land acquired or subdivided specifically for this purpose. These buildings, while modest in scale and different in function to surrounding buildings, were designed and constructed to a good standard, in a style

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

designed to harmonise with surrounding architecture, in order to reduce community fears or resistance to the incursion of this new technology and impacts on the appearance of streets.

The rise of electricity during the late nineteenth century, and in particular small motors for driving machinery and electrical lights, changed the configuration of industrial buildings and machinery. Electricity meant that factories could be designed with a more flexible layout because small electric motors eliminated the need for belt and shaft drives from the steam plant. Factory building design became less reliant on windows for natural light and gas lighting ventilation because of the advent of electric lighting. Electricity also created a new market for factories to produce the new consumer goods reliant on electric power, such as fridges, washing machines, telephones, stoves, ice cream, and the engineering for electric lights, trains and trams.

Site history:

The Birmingham Street substation was purpose-designed and built in 1932 by the Municipal Council of Sydney. This formed part of rapid expansion of the electricity network into Sydney's suburbs during the 1920s and early 1930s.

The eastern side of Birmingham Street began was subdivided in 1928 and 1935.

By late 1929, Sydney Municipal Council was seeking land for a new substation in the vicinity of Birmingham Street due to the increasing demand for electricity in the area. The existing pole transformer in Ellis Avenue, near Gardeners Road, by this time was at capacity and the Century Battery Co had applied for additional load at its works on Gardeners Road, west of Ellis Avenue.

Sydney Municipal Council purchased a vacant property in Birmingham Avenue for this new substation in July 1931. Sydney Municipal Council also decided to purchase a 1.2 metre wide strip of land from the owner of the property to the rear of the substation site (fronting Botany Road) in order to allow for cables to be laid between the substation and Botany Road. A price for the cable route was negotiated with the owners.

One of the adjacent properties owned by Italian vermouth-maker Francesco Cinzano & Co, mistakenly built their new factory on part of the then proposed substation site. The encroachment was sufficient to prevent the erection of the substation building to the previously prepared design. The company arranged to exchange their land with Sydney Municipal Council and the substation site and cable route were shifted further south to the next allotment. It appears that the new site and cable route were made available to the Sydney Municipal Council in January 1932.

Work on the site was programmed to start before the end of the month and to be complete within ten weeks. The official installation date is recorded as 27 April 1932, although this may have been when the building was handed over to the Electrical Department for equipping. The substation may have begun active service later in that year, or as late as January 1933.

In 1938, council sold approximately 200 square metres of land behind the substation building. Only the cable route and sufficient land to allow access from Botany Road was retained.

In subsequent years, the cable route became an open public passageway, allowing access between Birmingham Street and Botany Road. In 1967, the Council decided to close the passageway. One particular company in Birmingham Street asked that the passageway be kept open to allow access for its employees. However, the company relocated the following year and the matter was resolved.

Themes: **National theme**
4. Settlement

State theme
Utilities

Local theme
Electricity Substation

Designer: Sydney Municipal Council

Builder: Sydney Municipal Council

Year started: 1932

Year completed: 1932

Circa: Yes

Item name: Electricity Substation No. 375 including interiors**Location:** 27 Birmingham Street Alexandria 2015

Sydney

Physical description: Substation No. 375 was built by Sydney Municipal Council in 1932. The substation comprises a single-storey face brick building contained under a gabled roof concealed behind a high parapet wall. The facade wall is stepped down in height along the street frontage to form the fence and entrance to the side transformer yard.

The building is designed in the inter-war Art Deco style. It exhibits typical characteristics of the Art Deco style applied to a utilitarian building including the heavy geometric massing, contrasting decorative face brickwork, simple surfaces, stepped skyline, emphatic entrance with bullnosed brick fin projecting vertically above the parapet, stepped ornamental brickwork surrounding the entrance, and string courses along the parapet wall.

The centrally placed main entrance contains a steel roller shutter door with an inset smaller personnel door. A vertically proportioned door is located adjacent to the main entrance. Both openings have square brick-on-edge lintels and a threshold raised a step above street level.

The site includes a strip of land accessing Botany Road, originally for extending cabling to the main road.

Internally, the roof, foundations and floor structures have not been inspected by the authors.

Category: Individual building. Style: Inter-war Art Deco. Storeys: 1. Facade: Face brick. Side/Rear walls: Face brick.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Modification dates: Roof sheeting, original ventilator, gutters and downpipes, arch bars and roller door have been replaced. Colourbond fence to transformer yard was installed.

Recommended management: The substation should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Do not paint or seal face-brick walls.

No vertical additions should be made to the building.

Original building features should be maintained and conserved.

New uses for the building are to complement and enhance the internal and external character of the building by conserving and interpreting significant fabric and spatial qualities. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): Built in 1932, Electricity Substation No. 375 represents a surviving example of the original network of more than 360 substations built by Sydney Municipal Council from 1904 to 1936, which first supplied electricity to Sydney's industries and houses. The period and location of the substation records the expansion of Sydney's electricity network and the growth of electricity use in Alexandria. The building also marks the major changes electricity brought for Alexandria's growth, development and population.

[Historical significance]

The substation also represents an early surviving example of the industrial development of Birmingham Street built shortly after the land was subdivided, which pre-dates the buildings on the opposite side of the street. The building forms one of a group of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

Electricity Substation No. 375 forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Electricity Substation No. 375 and the other surviving substations demonstrate the fundamental role that electricity played in powering Australia's industrialisation and how technological innovations of the time, specifically electricity, defined Sydney's industrial development during the twentieth century. Often constructed to service the high energy demands of factories in the near vicinity, the number, concentration and location of substations provide markers of twentieth century industrial centres and factories in the way that chimney stacks mark the location of factories predating electricity.

The larger number of substations in Alexandria demonstrates its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity. Alexandria's Birmingham Road was almost exclusively occupied by industries from the inter-war and post-war periods.

Criteria b): The substation has significant associations with the Municipal Council of Sydney, who constructed the building as part of its early twentieth-century responsibility for the generation and distribution of electricity throughout the greater Sydney area from 1904 until 1936.

[Historical association significance]

Criteria c): The building demonstrates the characteristic modest form, quality of design and construction for Sydney's substations, which were designed to a higher standard than required for their function in order to integrate into their established urban contexts by reflecting neighbouring architecture or popular styles of the time.

[Aesthetic/ Technical significance]

Electricity Substation No.375 represents a good example of an unusually well-detailed, purpose-designed and built substation from the inter-war period. It demonstrates typical characteristics of the Art Deco style applied to a utilitarian building including the heavy geometric massing, roof form concealed behind a parapet wall, contrasting decorative face brickwork, simple surfaces, stepped skyline, emphatic entrance, stepped ornamental brickwork surrounding the entrance and string courses along the parapet wall.

The building contributes to the streetscape and is a significant example of civic architecture in the area.

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Criteria d): Social significance requires further study to ascertain its value to communities. The building may have value to community members with an interest in the history, buildings and technology for Sydney's electrification.
[Social/Cultural significance]

Criteria e): The building may offer research potential into the evolution of technology for electricity supply and architectural design for substations in Sydney.
[Research significance]

Criteria f):
[Rarity]

Criteria g): The building represents a good example of a substation from the inter-war period utilising the Art Deco style.
[Representative]
The substation forms part of a collection of extant substations, which together represent the growth of Sydney's electrical network and the major change that electricity brought for Sydney's growth, development and population during the twentieth century, in particular for the development of industry.

Of more than 360 originally built by Sydney Municipal Council from 1904 to 1930 in metropolitan Sydney, the current Energy Australia (AusGrid) heritage and conservation register records that 33 surviving substations are located in the City of Sydney. This number excludes those no longer owned or operated by the electricity supplier.

Intactness/Integrity: Intact externally

References:	Author	Title	Year
	James Pennington	Electricity Substations of the Sydney Municipal Council, p.169	2012
	Wilkenfeld and Spearitt	Electrifying Sydney	2004
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria, Sydney	1890
	Higinbotham & Robinson	Waterloo, Sydney	1890
	Schwager Brooks and Partners Pty Ltd	Energy Australia (Ausgrid) section 170 heritage and conservati	2007
	TZG Architects and Orwell & Peter Pl	Conservation Management Plan: Substation No. 6 and Undergr	2002

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	2		DP	456890

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	ListingDate
	Substation No.375	Heritage Act - s.170 NSW State agency heritage r	3430379	01/11/1994
	City of Sydney Industrial and Ware	Heritage study		

Data entry: Data first entered: 05/08/2014 Data updated: 14/05/2015 Status: Completed

Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: North-western (front) and south-western (side) elevations of the building

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34511321bcb9c654543a9d052c385e9c6db.JPG>

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Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Detail of main entrance showing stepped brickwork and parapet detailing

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 20/09/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34540c502d04b3741e3a2dd60ada2df2083.jpg>

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Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Front and side elevations of the building in the late 1930s

Copy right: Ausgrid

Image by: Ausgrid

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a1f22c4f41f04a29835638aacb156217.jpg>

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Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1928 subdivision plan of the Birmingham Estate "the hub of industrial activity"

Copy right: State Library of NSW

Image by: State Library of NSW

Image date: 08/12/1928

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/345ebd61aa7c483423b96e53788241b0a0f.jpg>

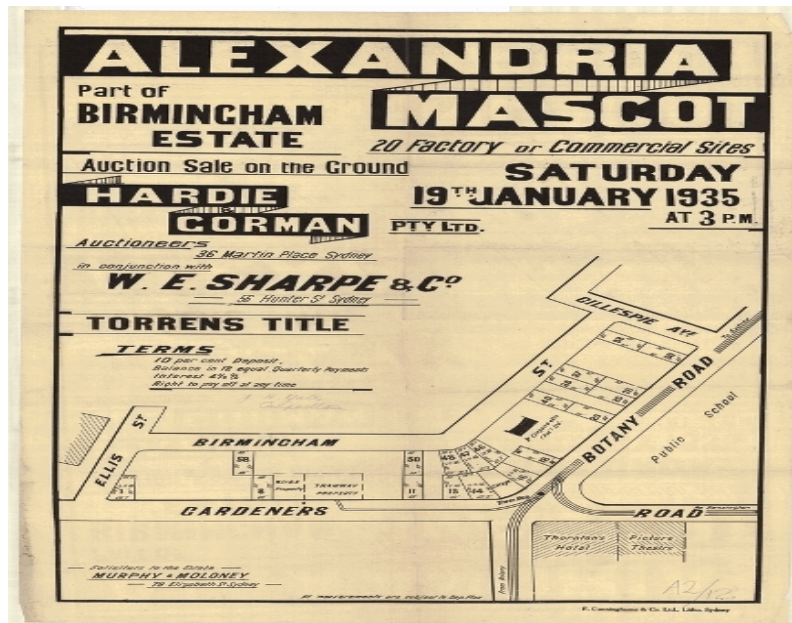
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Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1935 subdivision plan of Birmingham Estate shortly after the substation was built

Copy right: State Library of NSW

Image by: State Library of NSW

Image date: 19/01/1935

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3456956f52676ad4023ab48e3c4291f09d7.jpg>

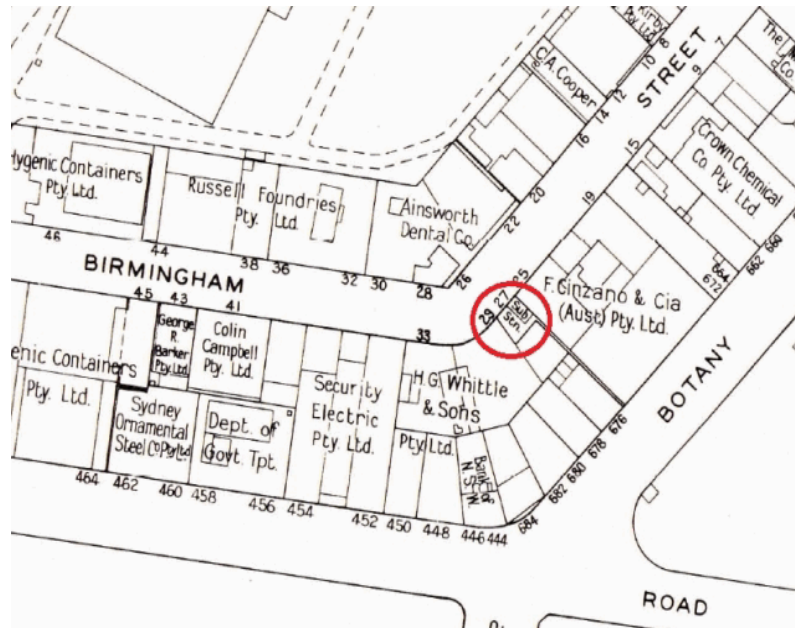
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Item name: Electricity Substation No. 375 including interiors

Location: 27 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing subject substation and surrounding industries

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455a7530a730c04fe1af45c11ca24767ae.jpg>

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Inventory 8

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Address: 29-33 Birmingham Street

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish: Alexandria

State: NSW

County: Cumberland

Other/former names: B & R Converters and Enterprises

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Manufacturing and Processing

Category: Other - Manufacturing & Processing

Owner: Private - Individual

Admin codes:

Code 2:

Code 3:

Current use: Warehouse and office

Former uses: Factory (joinery works), warehouse and office

Assessed significance: Local

Endorsed significance:

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Statement of significance: Built in 1935-42 for the prominent building firm, H. G. Whittle & Sons, this factory represents the industrial development of Alexandria during the early to mid-twentieth century. It is historically significant for its connection to the Australian manufacture of building supplies during the inter-war and post-war years.

The building has significant associations with the prominent building firm of H. G. Whittle & Sons from the 1930s to the 1950s and the major Sydney and Melbourne buildings this firm constructed during this period. These included the Transport Building on Macquarie and Phillip Streets, additions to Sydney's General Post Office, additions to Royal Prince Alfred Hospital, work on the Dental Hospital in Chalmers Street and the new Technical College at Ultimo.

The building represents a good example of a modest inter-war factory of Alexandria designed in the inter-war functionalist style. It demonstrates typical features of this style including heavy masonry construction, face brickwork, simple geometric building forms, high parapet wall concealing the roof form, restrained ornament through relief brickwork, quoins and vertically-proportioned timber windows. The building also represents the typical industrial building typology of this period where the administration and manufacturing functions are contained in different building forms, with the attached office distinguished by a frame of brick quoins, different openings and the stepped height of the parapet wall.

With its curved façade marking the bend in Birmingham Street, the building is a distinctive feature in the streetscape, which is visible from a number of near and distant vantage points. The inverted curved building frontage is a rare building form for inter-war factories within the Alexandria locality.

The H. G. Whittle & Sons factory represents an early surviving example of the industrial development of Birmingham Street built shortly after the land was subdivided, which pre-dates the factories on the opposite side of the street. The building forms one of a group of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

The factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former H. G. Whittle & Sons factory is of local heritage significance in terms of its historical, aesthetic and representative significance, its associations and rarity in the locality.

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Site history:

The building was constructed in 1935 as a workshop, factory and office by Harry Gladstone Whittle from the prominent building firm of H G Whittle and Sons Pty Ltd. This firm constructed a number of major buildings in Sydney and Canberra in the 1930s and 1940s. Whittle used this building as a joinery works and for the storage of tools and supplies.

In 1930, the land between Gillespie Avenue and Ellis Avenue, encompassing Birmingham Street was owned by Cent. Stor. Battery Co. Ltd. In 1935, the land that is now 29-39 Birmingham Street was advertised for sale.

Harry Gladstone Whittle purchased lots 46, 47 and 48 in May and October 1935, but the transfers were not registered until some months later (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8588, no 36-8; Certificate of Title 4764 f 88; CT 4832 f 176 and CT 4984 f 155). The sale of the land prohibited the development of noxious trades on these sites.

By 1935, the land valuation for the subject lots 46-48 (29-33 Birmingham Street) on 16 December recorded that Harry Gladstone Whittle had built a brick workshop, office and factory with an iron roof (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 32). It is likely that Whittle constructed the buildings himself.

The site expanded when Whittle purchased the adjacent lot 49 in April 1936 (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8588, no 33).

H G Whittle and Sons Pty Ltd worked on major projects in the late 1930s such as the Transport Building at Macquarie and Phillip Streets, additions to Royal Prince Alfred Hospital, work on the Dental Hospital in Chalmers Street and a new Technical College in Ultimo (SMH 3 Dec 1935, p 3; 20 Oct 1936, p 3; 2 May 1939, p 9). In the Australian Capital Territory, the firm built Canberra High School and 32 modern flats between the fire station and Hotel Wellington (Canberra Times, 30 March 1938, p 6; 7 March 1939, p 2). During the 1940s, the firm also constructed additions to Sydney's General Post Office (Daily Mercury, 6 December 1939, p 8).

By June 1942, additions had been made to the Birmingham Street factory when the whole site included lots 46-49 (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 32). These likely included the second-storey setback addition to the western office.

The 1945 Workplace Survey recorded that H G Whittle of Birmingham Street conducted a joinery works, using electrical machinery with 95 1/3 horsepower. The joinery works then employed 9 workers (SRNSW 7/6847).

The 1949 aerial photograph recorded the constructed factory at this time located on lots 46 and 47, and the sheds and a builder's yard which occupied lots 48-49 (1949 Aerial photograph AO 130, NSCA).

In 1954, ownership of the joinery works was transferred to William Richard Percy Fleming of Kingsford, company director.

On 31 May 1967, the site was purchased by Cyclamen Pty Ltd (Certificate of Title 4764 f 88; CT 4832 f 176 and CT 4984 f 155).

Later uses of the premises included food-processing and storage, light engineering, paper distribution and

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

printing and bonding of textiles (29-33 Birmingham St. Street cards, NSCA).

Themes: National theme

3. Economy

State theme

Commerce

Local theme

Warehouses

Designer: Unknown

Builder: Harry Gladstone Whittle

Year started: 1935

Year completed: 1942

Circa: No

Physical description: The building was constructed as a factory, workshop and office in 1935 with 1942 additions for H G Whittle and Sons. The factory comprises a single-storey brick building contained under a skillion roof supported by triangle trusses. The front elevation is curved inwards, formed to fit the trapezoidal shape of the site on the bend of Birmingham Street.

The building was designed in the inter-war functionalist style. It demonstrates typical features of this style applied to a utilitarian building including heavy masonry construction, face brickwork, simple geometric building forms, high parapet wall concealing the roof form, restrained ornament through relief brickwork, quoins and vertically-proportioned timber windows.

The office entrance is located at the western end of the building and the factory entrance for vehicles at the eastern end. The attached office is distinguished externally by the step in the parapet wall, framed by quoins and the transition to narrow vertically proportioned windows that resemble glass blocks. Other external features include the timber casement windows, a large horizontal signage panel and decorative ventilation brick capping on the front façade.

Internally, the large internal spaces of the former factory and warehouse are divided into three main spaces, all with exposed roof trusses, plus the separated office at the western end. The form of the factory spaces are defined by the irregular shape of the allotment, where the external walls follow the non-square site boundaries, including the curved street boundary and an oblique angle along the rear boundary.

The timber second-storey was added to the western office section of the building, set-back from the main building frontage.

Category: Individual building. Style: Inter-war functionalist. Storey: 1. Façade: Face brick.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Modification dates: Timeline of known dates for changes to the site:

8 May 1935

Transfer lot 46 & 47 to Harry Gladstone Whittle, 34 Malvern Ave, Croydon

3 October 1935

Transfer lot 48 to Harry Gladstone Whittle, 34 Malvern Ave, Croydon

16 December 1935

Valuation of lots 46-48 shows Brick Workshop, Office and Factory with iron roof

30 June 1942

Additions had been made to factory

1945

Workplace Survey shows H G Whittle, Birmingham Street carrying on a joinery works, using electrical machinery with 95 1/3 horsepower and 9 employees

1949

Aerial photo shows main factory on lots 46-47. Lots 48-49 occupied by sheds and builder's yard

3 September 1954

Transfer to William Richard Percy Fleming, Kingsford, company director

31 May 1967

Transfer to Cyclamen Pty Ltd

1 June 1967

Application by C Hayes to build amenities worth \$1,500

3 October 1967

Lease of factory and vacant land at 29-33 Birmingham Street, Alexandria to Peters Creameries Pty Ltd

6 September 1967

Development Application by Cyclamen Pty Ltd for storage and distribution of processed food products

3 October 1967

Lease to Foremost Consolidated Pty Ltd

24 October 1973

Lease to Haymarket Carrying Co Pty Ltd

15 October 1973

Haymarket Carrying Co Pty Ltd requests use to bale, store and distribute paper

9 November 1973

Development Application by Precision Engineering Company Pty Ltd to use for light engineering manufacturing

28 July 1978

Development Application by Caledonia Bond Pty Ltd to bottle wine and spirits

20 April 1982

Transfer to Shedlow Pty Ltd

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

28 April 1983

Application by C Cusack to make alterations to offices worth \$6,000

2 August 1984

Lease to Suntory (Aust) Pty Ltd

6 July 1988

Application by D Conway to use for printing and bonding of fabric and textiles

1 October 1988

Transfer to David Bernard Conway and Vivienne Conway

Recommended management: The building should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival and photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes. Face brick finishes should not be painted.

The curved facade, high parapet wall, signage panel, brick quoin detailing, vertically-proportioned timber windows, decorative ventilation brick capping and other 1930s and 1940s building features should be maintained and conserved.

Consider new uses for the building that will re-use and expose its industrial features to retain its former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments:

Criteria a): Built in 1935-42 for the prominent building firm, H. G. Whittle & Sons, this factory represents the industrial development of Alexandria during the early to mid-twentieth century. It is historically significant for its connection to the Australian manufacture of building supplies.

[Historical significance]

The H. G. Whittle & Sons factory represents an early surviving example of the industrial development of Birmingham Street built shortly after the land was subdivided, which pre-dates the factories on the opposite side of the street. The building forms one of a group of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods. The age and original use of these buildings reinforce the industrial origin of the street name and twentieth century planning of this street and surrounding locality as the Birmingham of Australia.

The former H.G. Whittle & Sons factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Criteria b): The building has significant associations with the prominent building firm of H. G. Whittle & Sons from the 1930s to the 1950s and the major Sydney and Melbourne buildings this firm constructed during this period. [Historical association significance] These included the Transport Building on Macquarie and Phillip Streets, additions to Sydney's General Post Office, additions to Royal Prince Alfred Hospital, work on the Dental Hospital in Chalmers Street and the new Technical College at Ultimo.

Criteria c): The building represents a good example of a modest inter-war factory of Alexandria designed in the inter-war functionalist style. It demonstrates typical features of this style including heavy masonry construction, face brickwork, simple geometric building forms, high parapet wall concealing the roof form, restrained ornament [Aesthetic/Technical significance] through relief brickwork, quoins and vertically-proportioned timber windows.

The building also represents the typical industrial building typology of this period where the administration and manufacturing functions are contained in different building forms, with the attached office distinguished by a frame of brick quoins, different openings and the stepped height of the parapet wall.

With its curved façade marking the bend in Birmingham Street, the building is a distinctive feature in the streetscape, which is visible from a number of near and distant vantage points. The inverted curved building frontage is a rare building form for inter-war factories within the Alexandria locality.

The building forms one of a group of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods, which give the street a distinct character.

Criteria d): Social significance requires further study to ascertain its value to communities. It's distinctive building form in the local neighbourhood may have value to recent and past residents and workers as a point of reference and [Social/Cultural significance] connection to the industrial past of Alexandria.

Criteria e):
[Research significance]

Criteria f): The curved building frontage is a rare building form for inter-war factories within the Alexandria locality, [Rarity] designed to fit the trapezoidal shape of the site on the bend of Birmingham Street.

Criteria g): The former H. G. Whittle warehouse building is a representative example of modest inter-war factory buildings and the early to mid-twentieth century industrial development of Alexandria. The building forms one of a group [Representative] of surviving modest industrial buildings on Birmingham Street from the inter-war and post-war periods.

Intactness/Integrity: The building appears intact externally

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	RTA	Aerial Photographs of Sydney May-June 1943	1943
	City of Sydney	Aerial Survey of the City of Sydney	1949
	City of Sydney	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria Sydney	1890
	Higinbotham & Robinson	Waterloo Sydney	1890

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage	1	2014

Item name: Former H. G. Whittle & Sons factory including interiors**Location:** 29-33 Birmingham Street Alexandria 2015

Sydney

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
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Latitude:**Longitude:****Location validity:****Spatial accuracy:****Map name:****Map scale:****AMG zone:****Easting:****Northing:****Listing: Name****Title****Number****ListingDate**

City of Sydney Industrial and Ware Heritage study

Data entry: Data first entered: 05/08/2014

Data updated: 12/05/2015

Status: Completed

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Curved front facade and western elevation of the factory and office, looking east

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345386a5569ef104aa09ee7700002739865.JPG>

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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Curved front elevation of the building

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345c0c7b496fce1460f90d5a7c18265acc2.JPG>

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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Detail of the western attached office

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date:

Image number:

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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: Western elevation of the former factory office showing the rear addition

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3457a13a8b17768473d87c4f21a3dc69c7d.JPG>

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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1928 subdivision plan of the Birmingham Estate "the hub of industrial activity"

Copy right: State Library of NSW

Image by: State Library of NSW, a9617005

Image date: 08/12/1928

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/34580eda0a27b804591b933e9d82a6c0f41.jpg>

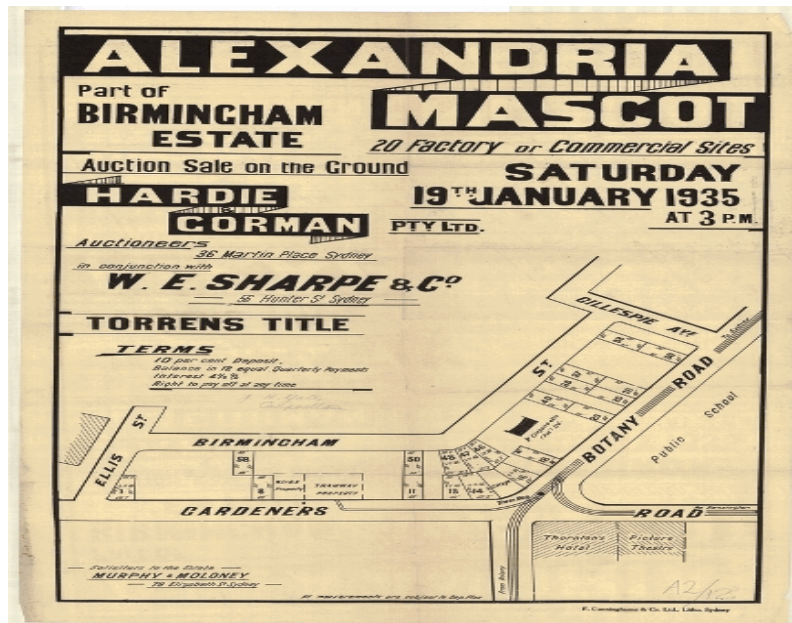
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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1935 subdivision plan of the Birmingham Estate

Copy right: State Library of NSW

Image by:

Image date: 19/01/1935

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345ff5534c23d474a3b9fc701019671bd04.jpg>

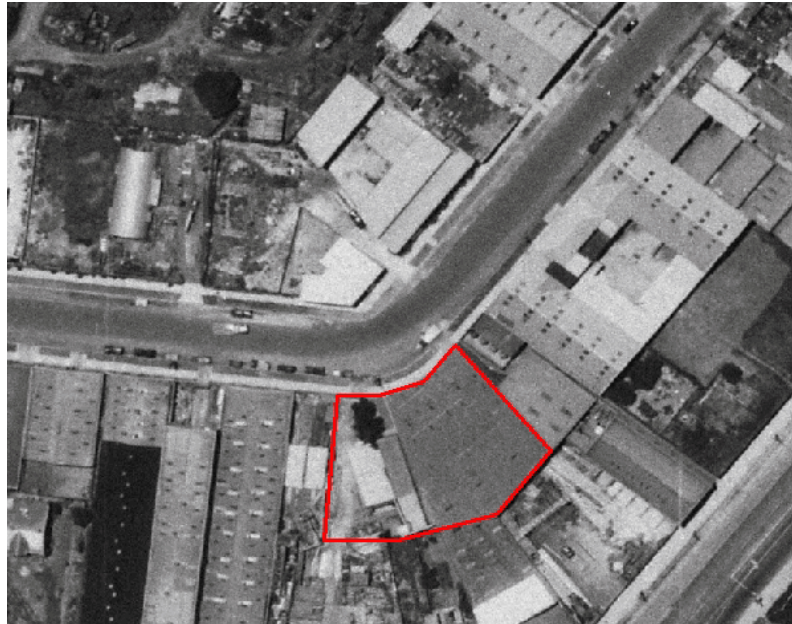
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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1949 aerial survey showing the subject factory buildings constructed by this time

Copy right: City of Sydney Archives

Image by: City of Sydney

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3453ef1b3b6324b4775b12470ee42ddfee1.jpg>

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Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing the subject site, circled, and surrounding industries

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345e6cd3a92a100477babee693a9459bd95.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345e6cd3a92a100477babee693a9459bd95.jpg

Item name: Former H. G. Whittle & Sons factory including interiors

Location: 29-33 Birmingham Street Alexandria 2015

Sydney

Image:



Caption: 1940 work of Whittle & Sons for construction of an addition to Sydney's General Post Office

Copy right: City of Sydney

Image by: City of Sydney archives (SRC21058)

Image date: 23/05/1940

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34525c0aa1e5dbc4262970b9acfe72c71cc.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34525c0aa1e5dbc4262970b9acfe72c71cc.jpg

Inventory 9

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Address: 602-612 Botany Road

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish:

State: NSW

County:

Address: 27-31 Ralph Street

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish:

State: NSW

County:

Other/former names: Government Annex 89, British Farm Equipment Pty Ltd, Standard Motor Products Ltd, Scott and Bowne (Australasia), Allens

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Manufacturing and Processing

Category: Other - Manufacturing & Processing

Owner:

Admin codes:

Code 2:

Code 3:

Current use: Storage

Former uses: Factory

Assessed significance: Local

Endorsed significance:

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Statement of significance: Built in 1937 and 1942 for machinery manufacturers, Coote and Jorgenson Engineers, this former factory represents the industrial development of Alexandria during the mid-twentieth century. It is historically significant for its connection to the Australian manufacturing of tanks and maritime craft for World War II and automotive and farm machinery during peacetime, and as evidence of this formerly widespread engineering industry in Alexandria. The factory buildings also provide evidence of other widespread industries in the area from their post-war uses for manufacturing chemicals, confectionery and moulding plastics. As such, the factory represents the development of new technology and products of the twentieth century, in particular the development of automated transport and equipment for Australian defence and agriculture, and the growing use of plastics and chemicals.

The scale of the site and its buildings demonstrate the importance of the munitions and engineering industry for Sydney and Australia during the twentieth century and document the growth of this industry to support the war effort for World War II.

The buildings also represent rare surviving examples of a government annex constructed for the Australian Cruiser Tank project, which was a significant engineering achievement for Australian industry. As former government annex 89, the site provides evidence of Australian 'shadow factories' constructed by the Commonwealth Department of Munitions, in the same manner as Great Britain, for civilian manufacture of munitions in the lead up to World War II. Two other known annexes associated with this project at the Hadfields Steels site and the Sonnerdale annex on Parramatta Road in Camperdown have been redeveloped or demolished.

Aesthetically, the two buildings make important contributions to the streetscapes of Botany Road and Ralph Street. Both buildings represent good examples of mid-twentieth century factory buildings designed in the inter-war functionalist style. The buildings feature typical characteristics of the functionalist style including contrasting horizontal and vertical motifs, simple geometric massing and ornamentation, high parapet concealing sawtooth roofs, stepped skylines, curved corner elements, polychromatic face brickwork, relief decoration emphasising parallel lines, ornamentation concentrated along the parapet wall, steel multi-paned ribbon windows and monumental entrances. The Botany road building also demonstrates Art Deco elements with its pronounced symmetry and geometric decorative motifs.

The two buildings demonstrate the industrial building typology which contains administrative and manufacturing uses in distinctly different building forms, including the characteristic sawtooth-roof factory located behind a more architecturally distinctive office or showroom on the street frontages. When first constructed, the buildings represented the latest in engineering workshop design of its time with the sawtooth roof construction designed to maximise natural light and welded steel frame with aluminium paint to minimise shadows.

While openings and brickwork on the ground floor have been altered for subsequent uses, the buildings retain a higher degree of architectural integrity externally on the first floor and can still be recognised as industrial buildings from the inter-war period. Alterations to the Botany Road building to infill the ground floor windows likely demonstrate factory design for manufacturing chemicals.

The site may also hold significance to former Australian military personnel for its connection to the tanks manufactured at this site used during World War II and to some communities for its connection to the Ferguson tractors and other specialised machinery used on Australian farms.

The former Coote and Jorgenson Engineers factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former factory buildings are of local heritage significance in terms of its historical, associations, aesthetic, rarity and representative values.

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Historical summary of the site:

This factory was constructed in circa 1937 as government annex 89 for Coote & Jorgensen to manufacture tank transmission gears and other components for the Australian Cruiser Tank project. The Australian Cruiser Tank project was a significant engineering achievement for Australian industry as it was designed and produced in Australia. In the later war years, the site became part of the network of factories producing small maritime craft for use in the Pacific Islands.

The Commonwealth Department of Munitions was created in 1939. Before the war, it had been developing 'annexes' based on the British 'shadow factory' programme, where existing civilian firms were provided with buildings and machinery in semi-separate facilities ready to produce munitions when needed. These 'annexes' were built on land owned by private companies leased to the Commonwealth, or operated with their own equipment and staff on behalf of the Commonwealth (D P Mellor, *The Role of Science and Industry*, p 30).

On 18 March 1938, a new certificate of title was issued to Coote & Jorgensen Pty Ltd for one acre one rood and 16 ¼ perches of the subject land between Ralph Street and Botany Road, after the property conversion to Torrens Title (CT 4918 f 230).

E R Coote and O H Jorgensen formed the firm of Coote & Jorgensen in 1928 (SMH, 26 April 1949, p 6). It was first established at Salisbury Road, Camperdown (Wise, *Directory*, 1936, p 196) and subsequently expanded to this site. At this time, the company was a medium-sized engineering operation, manufacturing machinery such as wire drawing machines and industrial power transmissions.

The two factory buildings were constructed in two stages in circa 1937 and 1942 as a government annex to produce automotive gears and other components for the Australian Cruiser Tank project, principally the transmission gears. It was then known as Annex 89 (Australian Munitions Digest, Melbourne, 1946, NLA, Chapter 8, Appendix 1, page 5).

The construction of the new factory was recorded in the journal 'Building' in the September 1937 edition. The building represented the latest in engineering workshop design of its time. The exterior walls were constructed of brick with a sawtooth roof for maximum natural light, clad with corrugated asbestos sheeting. Internal framing was welded steel, painted with aluminium paint to minimise shadows (Building, 24 Sept 1937, p 44d).

The growth of the factory and its workforce is reflected by Coote & Jorgensen's advertisements for workers at 602 Botany Road, Alexandria. In 1941, the company advertised for an experienced gear cutter (SMH, 19 March 1941, p 19). On 12 June 1941, Coote & Jorgensen advertised for teenagers 15 to 16 years old to become apprentices at their engineering shop at this site (SMH, 12 June 1941 p 12).

The Ralph Street building appears to have been constructed following the Botany Street building. It was completed in approximately 1942. Government photos from this time of Annex 89 show the Ralph Street building in July 1942 as under construction with reinforced concrete columns and concrete slab floors. Photos from the same series show the completed building in November 1942 (National Archives of Australia, SP29/6, Coote and Jorgenson Complex).

The valuation of the land owned by Coote & Jorgensen Pty Ltd (CT 4918 f 230) on 27 November 1942 record that the buildings on the site then included a brick factory and offices, with a corrugated fibro roof

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

(Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 174). The 1943 aerial photograph shows the sawtooth roof of the factory covering almost the entire site. It had the same configuration from the air as the current building (1943 aerial photo SIX, LPI).

Additions by 19 February 1945 included offices and a drawing office (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 174).

The 1945 workplace survey listed Coote & Jorgensen Ltd at 600-612 Botany Road conducting an engineering business using electrical machinery rated at 422 horse power. The company employed 251 workers by this time (SRNSW 7/6847).

A 1946 listing of Commonwealth Government annexes records that the Coote & Jorgensen works at 602 Botany Road, Alexandria, had originally been set up to supply tank gears and parts. With the winding down of that project, it became part of the factory network constructing small maritime craft. The government later sold the factory to Coote & Jorgensen (Australian Munitions Digest, Melbourne, 1946, NLA, Chapter 8, Appendix 1, page 5).

Jorgenson's great ambition was to become involved in the automotive industry. During the early post-war years, the company began to make car replacement parts. The company expanded rapidly. By the late 1940s they began building a plant at the present site in Fairfield which commenced operation in 1952.

One of the co-founders of the firm, E R Coote, died on 24 April 1949 (SMH, 26 April 1949, p 6).

On 22 February 1954, the factory was transferred to Standard Motor Products Ltd (CT 5945 f 213). British Farm Equipment Pty Ltd was part of Standard Motor Products Ltd. They supplied motorcar, tractor and farm equipment. In 1954, Standard Motor Products Ltd proposed alterations to the building frontage (600-612 Botany Road, Street cards, NSCA). The company's main office was in Melbourne, whilst its Sydney premises were at 602-612 Botany Road, Alexandria. It supplied the Ferguson range of agricultural tractors and other specialised farm machinery (SMH, 4 March 1954, p 6; British Farm Equipment Pty Ltd, The road to dairy farm prosperity: A handbook for Australian dairy farmers, Melbourne, 1956).

In approximately 1957, the American company known as BorgWarner corporation put in a successful takeover bid for Coote & Jorgenson. The company subsequently produced more automotive and industrial products, and opened manufacturing plants and offices in a number of countries around the world.

On 23 February 1960, the property was transferred to Scott and Bowne (Australasia) Ltd (CT 5945 f 213). On 7 April 1960, Scott and Bowne (Australasia) Ltd proposed renovations to use the buildings for manufacturing chemicals (600-612 Botany Road, Street cards, NSCA).

In December 1969, the property was transferred to Allens Sweets Pty Ltd (CT 5945 f 213). In the same year Council received a development application from Allens Sweets Pty Ltd to use the building as a garage, workshop, warehouse, and for manufacturing and packaging confectionery (600-612 Botany Road, Street cards, NSCA).

On 20 June 1974, Allens Sweets applied to use the property for moulding plastics (600-612 Botany Road, Street cards, NSCA). The buildings were subsequently used as warehouses and showrooms in the 1980s by various firms, whilst owned by World Wide Collection Agency Pty Ltd (600-612 Botany Road, Street cards, NSCA).

Following the redevelopment of other former government annexes including the Hadfields Steels site and the Sonnerdale annex on Parramatta Road, Camperdown, replaced by a McDonald's outlet, this site is one of the few and possibly only surviving annexes associated with the Australian Cruiser Tank project.

Themes: **National theme**

3. Economy

3. Economy

State theme

Commerce

Industry

Local theme

Warehouses

Warehouses

Item name: Former Coote & Jorgenson Engineers factory including interiors**Location:** 602-612 Botany Road Alexandria 2015

Sydney

Designer: Unknown**Builder:** Unknown**Year started:** 1936**Year completed:** 1942**Circa:** Yes

Physical description: The site contains two substantial former factory buildings fronting Botany Road and Ralph Street, dating from circa 1937 and 1942. Both are constructed of face brick walls with sawtooth roofs over the main factory buildings and separate gabled or hipped roofs over the office or showroom component, concealed behind high parapet walls.

While both are double-storey in height, the Botany Road building is single-storey, except for the office/showroom over the front entrance. The Ralph Street building has vehicular access from both streets and no street setback. The Botany Road building is setback from the street behind a low face brick wall of the same style and materials as the building.

Both buildings are designed in the inter-war functionalist style. The two buildings exhibit typical characteristics this style including contrasting horizontal and vertical motifs, simple geometric massing and ornamentation, high parapet concealing pitched roofs, stepped skylines, curved corner elements, polychromatic face brickwork, relief decoration emphasising parallel lines, ornamentation concentrated along the parapet wall, steel multi-paned ribbon windows (on Ralph Street) and monumental entrances on both street frontages. The Botany road building also demonstrates Art Deco elements with its pronounced symmetry and geometric decorative motifs along the parapet wall. Regularly-spaced downpipes divide the facades of both buildings and mark the position of the sawtooth roofs behind the parapets.

The infill of ground floor windows, some new brickwork and concrete hood along the Botany Road elevation likely date from the post-war period when the building was converted to manufacture chemicals because chemical plants had no windows due to the risk of explosion. Aluminium-framed windows and the metal awning on the Botany Road elevation are more recent replacements.

While openings and brickwork on the ground floor have been altered for subsequent uses, the buildings retain a higher degree of architectural integrity externally on the first floor and can still be recognised as industrial buildings from the inter-war period.

Internally, the roof, foundations and floor structures have not been inspected by the authors.

Category: Precinct. Style: Inter-war functionalist with Art Deco elements. Storeys: One and two. Façade: Face brick. Roofs: Sawtooth predominantly concealed behind parapet wall.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Modification dates: Timeline of known dates for changes to the site:

18 March 1938

Certificate of title issued to Coote and Jorgensen Pty Ltd for one acre one rood and 16 ¼ perches

19 March 1941

Coote and Jorgensen, of 602 Botany Road, Alexandria, advertised for an experienced gear cutter

12 June 1941

Coote and Jorgensen, of 602 Botany Road, Alexandria, advertised for teenagers 15 to 16 years old to become apprentices at the engineering shop

27 November 1942

Valuation of land owned by Coote and Jorgensen Pty Ltd noted improvements of a brick factory and offices, with corrugated fibro roof

1943

Aerial photo shows sawtooth roof factory covering almost the entire site

19 February 1945

Additions include offices and drawing office

1945

Workplace survey listed Coote and Jorgensen Ltd at 600-12 Botany Road conducting an engineering business using electrical machinery rated at 422 hp with 251 employees

1946

Coote and Jorgensen 602 Botany Road, Alexandria originally supplied tank gears and parts but was then part of the project for constructing small maritime craft

8 February 1954

Proposed alterations to use front premises for motorcar, tractor and farm equipment suppliers Standard Motor Products Ltd

22 February 1954

Ownership transfer to The Standard Motor Products Ltd

23 February 1960

Ownership transfer to Scott and Bowne (Australasia) Ltd

7 April 1960

Application for renovations to use for manufacturing chemicals by Scott and Bowne (Australasia) Ltd

1 February 1961

Alterations proposed by Scott and Bowne valued at £6,000

10 June 1969

Application to use as garage, workshop, warehouse, manufacturing and packaging confectionery by Allens Sweets Pty Ltd

18 December 1969

Ownership transfer to Allens Sweets Pty Ltd

20 June 1974

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Allens Sweets proposal to use for moulding plastics

14 July 1988

Ownership transfer to World Wide Collection Agency Pty Ltd

9 August 1988

Application to use as showroom warehouse and office by general merchants Mayvic Pty Ltd

8 March 1989

Lease to Applied Polymers Pty Ltd at for four years in option for an additional four-year lease

21 March 1989

Application to use part as office and showroom by World Wide Collection

Recommended management: The buildings should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the buildings prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival and photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Face brickwork, steel windows, parapet ornamentation, Art Deco and functionalist decorative details, and other original building features should be maintained and conserved.

Do not paint, render or seal unpainted face brickwork. Consider removal of paint from originally unpainted brickwork.

For repainting, use a colour scheme appropriate to the inter-war period of the building, which highlights decorative details in different tones.

Consider new uses for the buildings that will re-use and expose their industrial features to retain its former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently; it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Criteria a): Built in 1937 and 1942 for machinery manufacturers, Coote and Jorgenson Engineers, this former factory represents the industrial development of Alexandria during the mid-twentieth century. It is historically significant for its connection to the Australian manufacturing of tanks and maritime craft for World War II and automotive and farm machinery during peacetime, and as evidence of this formerly widespread engineering industry in Alexandria. The factory buildings also provide evidence of other widespread industries in the area from their post-war uses for manufacturing chemicals, confectionery and moulding plastics.

[Historical significance]

As such, the factory represents the development of new technology and products of the twentieth century, in particular the development of automated transport and equipment for Australian defence and agriculture, and the growing use of plastics and chemicals.

The buildings also represent rare surviving examples of a government annex constructed for the Australian Cruiser Tank project, which was a significant engineering achievement for Australian industry. As former government annex 89, the site provides evidence of Australian 'shadow factories' constructed by the Commonwealth Department of Munitions, in the same manner as Great Britain, for civilian manufacture of munitions in the lead up to World War II. Two other known annexes associated with this project at the Hadfields Steels site and the Sonnerdale annex on Parramatta Road in Camperdown have been redeveloped or demolished.

The scale of the site and its buildings demonstrate the importance of the munitions and engineering industry for Sydney and Australia during the twentieth century and document the growth of this industry to support the war effort for World War II. Alterations to the Botany Road building to infill the ground floor windows record its conversion to manufacturing chemicals.

The former Coote and Jorgenson Engineers factory forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The factory buildings have significant associations with the major mid-twentieth century machinery manufacturers, Coote & Jorgenson Engineers from 1936 to 1951, and the Commonwealth Department of Munitions and the Australian Cruiser Tank project during the World War II period. The buildings also have associations with the twentieth century operations of British Farm Equipment Pty Ltd, part of Standard Motor Products Ltd, during the 1950s, and the motorcar, tractor and farm equipment they manufactured. Subsequent associations with other manufacturing companies and products include the chemical manufacturers, Scott and Bowne (Australasia) from the 1960s, and confectionery manufacturers, Allens Sweets, from the 1970s.

[Historical association significance]

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Criteria c): Aesthetically, the two buildings make important contributions to the streetscapes of Botany Road and Ralph Street. Both buildings represent good examples of mid-twentieth century factory buildings designed in the inter-war functionalist style. The buildings feature typical characteristics of the functionalist style including contrasting horizontal and vertical motifs, simple geometric massing and ornamentation, high parapet concealing sawtooth roofs, stepped skylines, curved corner elements, polychromatic face brickwork, relief decoration emphasising parallel lines, ornamentation concentrated along the parapet wall, steel multi-paned ribbon windows and monumental entrances. The Botany road building also demonstrates Art Deco elements with its pronounced symmetry and geometric decorative motifs.

**[Aesthetic/
Technical
significance]**

The two buildings demonstrate the industrial building typology which contains administrative and manufacturing uses in distinctly different building forms, including the characteristic sawtooth-roof factory located behind a more architecturally distinctive office or showroom on the street frontages. When first constructed, the buildings represented the latest in engineering workshop design of its time with the sawtooth roof construction designed to maximise natural light and welded steel frame with aluminium paint to minimise shadows.

While openings and brickwork on the ground floor have been altered for subsequent uses, the buildings retain a higher degree of architectural integrity externally on the first floor and can still be recognised as industrial buildings from the inter-war period. Alterations to the Botany Road building to infill the ground floor windows likely demonstrate factory design for manufacturing chemicals.

Criteria d): Social significance requires further study to ascertain its value to communities. The buildings may also hold significance to former Australian military personnel for their connection to the tanks manufactured at this site used during World War II and to some communities for its connection to the Ferguson tractors and other specialised machinery used on Australian farms.

**[Social/Cultural
significance]**

Criteria e): The buildings have potential to yield information on the design of government annexes for manufacturing munitions for World War II, in particular relating to the Australian Cruiser Tank Project.

**[Research
significance]**

Criteria f): Following the redevelopment of other former government annexes including the Hadfields Steels site and the Sonnerdale annex on Parramatta Road, Camperdown, replaced by a McDonald's outlet, this site is now rare as one of the few, and possibly only, surviving annexes associated with the Australian Cruiser Tank project.

[Rarity]

Criteria g): The buildings represent good examples of factories from the inter-war period designed in the inter-war functionalist style.

[Representative]

Intactness/Integrity: Relatively intact externally

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	SSMC Heritage Photographic Survey	Two to four storey brick factory, Botany Road frontage	
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	A & B		DP	361014

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

AMG zone:

Easting:

Northing:

Listing: Name

Title

Number

ListingDate

City of Sydney Industrial and Ware Heritage study

Data entry: Data first entered: 05/08/2014

Data updated: 13/05/2015

Status: Completed

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Building presentation to Botany road

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3454d82b70210a84f7badbd7eda6a3d60cf.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3454d82b70210a84f7badbd7eda6a3d60cf.JPG

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Botany Road entrance

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455bc866f6a6914011acdc296d4834994e.JPG>

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Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Facade ornamentation over the entrance and first floor office

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 20/09/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34541c89a6ba45a4d1b9dc3d87fbbc9dd42.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34541c89a6ba45a4d1b9dc3d87fbbc9dd42.jpg

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Dwarf brick fence detail

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 20/09/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345000e5ac4fe1d4dcd3db51b54027dc25.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345000e5ac4fe1d4dcd3db51b54027dc25.jpg

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Botany Road view through to Ralph Street building

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345f0f3d2589cb14f02aa81dce55426480d.JPG>

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Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Ralph Street building

Copy right: The City of Sydney Council

Image by: City Plan Heritage and JCIS Consultants

Image date: 20/09/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345bdead6bd61554102ad408bfc84134d9f.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345bdead6bd61554102ad408bfc84134d9f.jpg

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: The factory photographed from the air in 1943 with the same sawtooth roof configuration today

Copy right: Land & Property Information

Image by: SIX aerial photo, LPI

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345667685a09f0b4d6cafee676ab2e7fa4b.png>

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Sydney

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Botany Street building with original windows, published in 'Building' journal (24 Sept 1937, p. 44c)

Copy right: Building

Image by: Building journal

Image date: 24/09/1937

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a98e6277182f4801a4e3ab102adf851c.jpg>

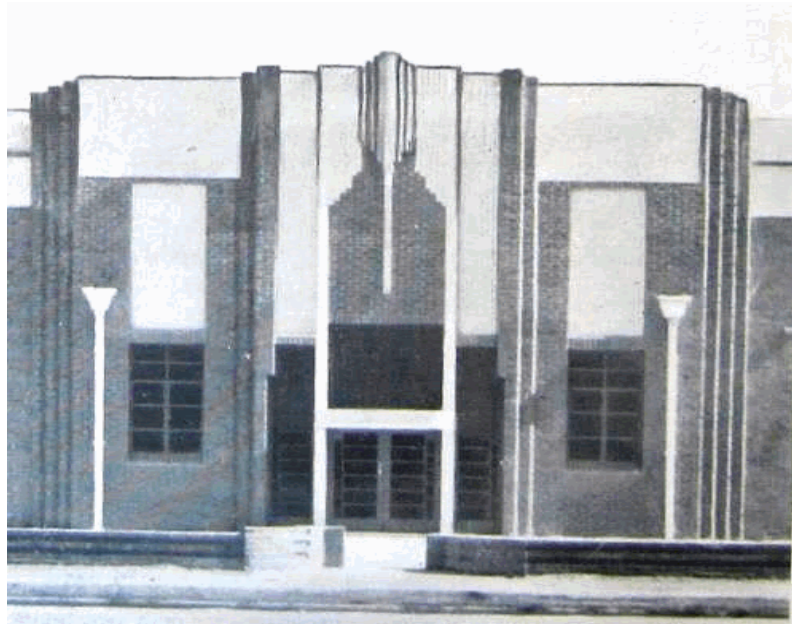
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Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Original factory entrance, as published in 1937 'Building' journal (24 Sept 1937, p. 44c)

Copy right: Building

Image by: Building journal

Image date: 24/09/1937

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3450317c128f77d4a9abb300f1efe686fe8.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3450317c128f77d4a9abb300f1efe686fe8.jpg

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: South-west corner of Botany Road building in 1942 showing sawtooth roof behind

Copy right: National Archives of Australia

Image by: National Archives of Australia (NAA:SP29/6,COOTE & JORGENSEN COMPLEX)

Image date: 21/05/1942

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34513c2452b23874c2f8514704256ace572.jpg>

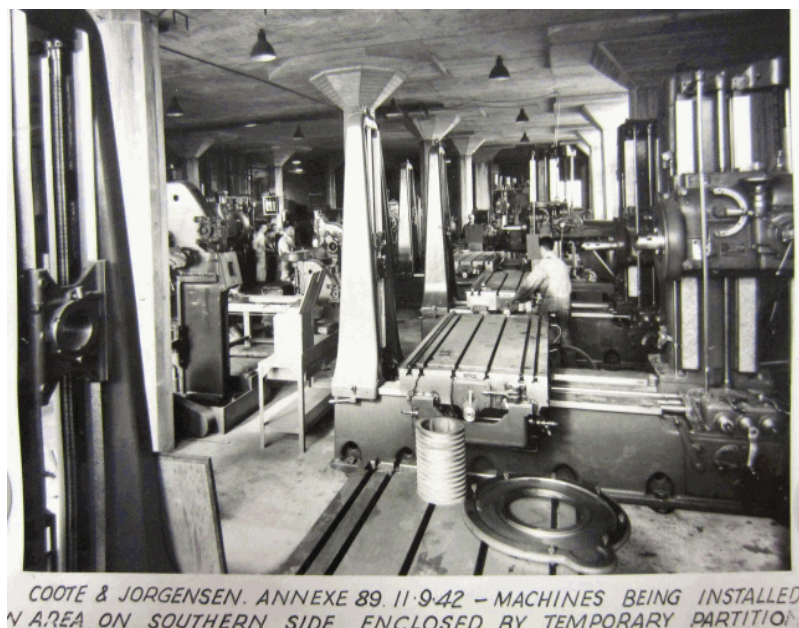
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Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: 1942 workshop interiors showing machinery installation

Copy right: National Archives of Australia

Image by: National Archives of Australia (NAA:SP29/6,COOTE & JORGENSEN COMPLEX)

Image date: 11/09/1942

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3459a20a48ff6344950a760b89649f4b534.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3459a20a48ff6344950a760b89649f4b534.jpg

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Botany Street building under construction in 1942 with reinforced concrete columns and concrete slab

Copy right: National Archives of Australia

Image by: National Archives of Australia (NAA:SP29/6,COOTE & JORGENSEN COMPLEX)

Image date: 14/07/1942

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34551c1ee5da53d4d7c874cbdf57b39baf3.jpg>

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Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Recently completed Ralph Street building in 1942, showing southern side elevation

Copy right: National Archives of Australia

Image by: National Archives of Australia (NAA:SP29/6,COOTE & JORGENSEN COMPLEX)

Image date: 28/11/1942

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345be8603718d994c55a766bb0d45bf06af.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345be8603718d994c55a766bb0d45bf06af.jpg

Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: An Australian Cruiser Tank (AC1) demonstrating its prowess in 1943 (SLV H98.105/4277)

Copy right:

Image by:

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345022130b32d284876b3ac88592379ce4f.jpg>

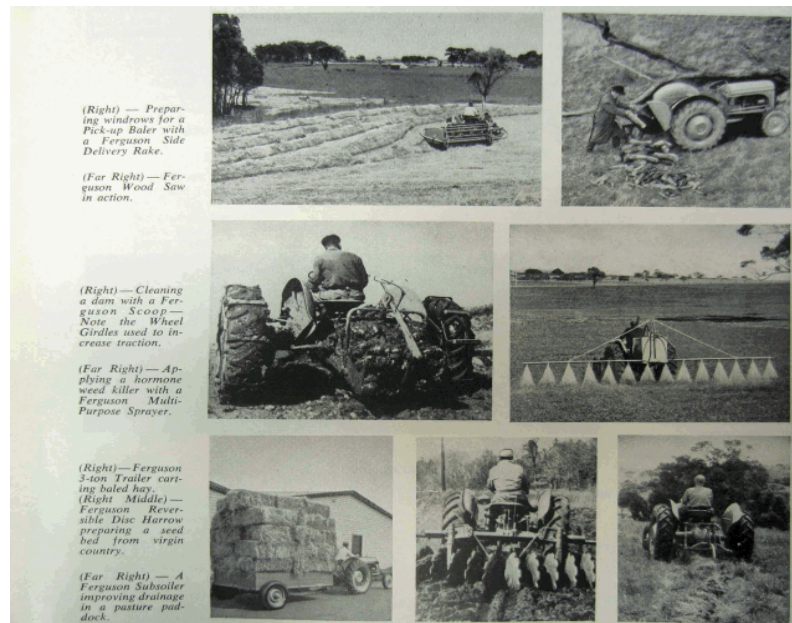
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Item name: Former Coote & Jorgenson Engineers factory including interiors

Location: 602-612 Botany Road Alexandria 2015

Sydney

Image:



Caption: Sample of British Farm Equipment tractors and farm machinery sold in Australia

Copy right:

Image by: British Farm Equipment

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34523950fff5dfa4b05854f5525a57c1ac3.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34523950fff5dfa4b05854f5525a57c1ac3.jpg

Inventory 10

Item name: Former White Way service station including interiors**Location:** 684 Botany Road Alexandria 2015

Sydney

Address: 684 Botany Road**Planning:** Sydney South**Suburb/nearest town:** Alexandria 2015**Local govt area:** Sydney**Parish:****State:** NSW**County:****Other/former names:** Advanx Tyre-pair Co, Civic Service Station, One Stop Super Service Station, inter-war service station**Area/group/complex:****Group ID:****Aboriginal area:** Eora**Curtilage/boundary:** As described in Sydney Local Environmental Plan**Item type:** Built**Group:** Transport - Land**Category:** Petrol Station/Service Station**Owner:** Private - Individual**Admin codes:****Code 2:****Code 3:****Current use:** Commercial**Former uses:** Service station**Assessed significance:** Local**Endorsed significance:****Statement of significance:** Built in 1929 as a purpose-built service station, the former White Way service station represents the growth of new industries in Alexandria during the twentieth century, specifically for the automobile industry.

The building provides evidence of the growing use of the motor car during the twentieth century, which had a profound impact not only on industry, but also on Sydney's development, environment and culture.

The service station also demonstrates the early period of petrol supply through independent service operators during the early twentieth century, which were largely replaced by chain petrol stations associated with the oil companies by the 1950s.

While altered, the building is still recognisable as an example of an inter-war service station designed in the Spanish Mission style. It is a rare surviving example of an inter-war Spanish Mission service station within the City of Sydney. The building exhibits typical features of inter-war service stations of this style, including the integrated upper level residence, the curved decorative parapet, groups of arched openings and exaggerated texture applied to brick walls. The use of this flamboyant style inspired by Hollywood movies for a modest utilitarian building, demonstrates the glamour attached to motor cars at the time.

With its prominent corner position at the junction of two main roads and distinctive architecture, the building also represents a local landmark. The former service station makes an important contribution to the streetscapes of Gardeners and Botany Roads and is highly visible from a number of near and distant vantage points.

The former White Way service station forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former service station is of local heritage significance in terms of its historical, aesthetic, representative and rarity values within the local government area.

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

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Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former White Way service station including interiors

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were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Motor car and service stations history (Kirk and Martin 2006):

Automobiles were a major product of manufacturing, produced through factory assembly lines. They were also part of the technology which supported twentieth century industry by transporting materials and manufactured goods, and ultimately allowed industry to move out of inner cities. Their increasing use during the twentieth century spurred the growth of the motor car industry in Australia. Surviving service stations from the inter-war period provide evidence of the growing use and dominance of the motor car during the twentieth century.

In 1911 a total of 3,975 private motor cars were registered in NSW. By 1921 this had risen to 28,665 and by 1926 had made a further dramatic increase to 104,675, rising to 170,329 in 1929. In the early days of motor cars, owners bought motor spirit in cases and tins and filled their tanks themselves. By the 1920s the invention of the petrol bowsers and safety concerns about the storage of fuel in tins led oil marketing companies to begin the widespread installation of petrol pumps at commercial garages. Increasingly during the 1920s motor garages, sometimes called filling stations but more often service stations, began operating as a separate retail activity to motor body builders and car dealers, with petrol being delivered in bulk by oil company tank wagons for underground storage.

In 1925 the annual Sands' Directory listed "Motor Service Stations" as a trade directory for the first time with just 25 entries. The number grew rapidly through the late 1920s and 1930s. By 1926, 44 stations were listed in the directory, with 70 by 1927, 109 in 1928, 233 in 1930, 281 in 1931 and 321 in 1932-3; the last year when the Sands directory was published. The severe economic depression of the early 1930s led to a dramatic drop in the number of car registration and a significant decrease in the building rate of new service stations.

Multi-brand garages remained a common feature of petrol retailing until the early 1950s. In August 1951 the oil company Shell announced its intention to introduce 'solo' marketing, requiring selected resellers to deal exclusively with Shell. Within months Vacuum, Caltex, and Atlantic Union (later Esso) adopted similar policies, involving agreements with resellers to distribute a single brand of petrol.

The oil companies also demanded a modernised appearance for the new 'solo' outlets, including the removal of individual identifying features, the installation of new pumps, the use of uniform signage and colour schemes and the provision of large display areas for merchandise and accessories.

Smaller companies such as Ampol and H.C. Sleight (later Golden Fleece) continued to supply the multi-brand, independent stations until Ampol also introduced 'solo' marketing in 1952 and constructed its own service stations. In December 1952 Ampol opened the first company-owned service station in Australia in Mosman, Sydney, amid great ceremony.

Historical summary of the site:

These buildings were constructed in 1929 as the White Way service station for Mary Elsie Gearin. The service station was leased to a succession of garage proprietors.

A certificate of title for lot 15, DP 16027 was first issued to Mary Elsie Gearin, wife of Michael Gearin, junior, merchant of Sydney on 26 August 1929. It included a covenant forbidding use of the land for noxious industries or as a public parking area for motor vehicles (Certificate of Title 4317 f 87). A mortgage of 2 October 1929 possibly financed construction of the service station on this land (CT 4317 f 87).

Item name: Former White Way service station including interiors

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The White Way service station was purpose-built for use as a motor garage, filling and service station. As was characteristic for inter-war service stations, the garage design incorporated an upper level residence, likely for the garage manager or proprietor. The building was designed in the Spanish Mission style, an architectural style of the inter-war period which was popular for the design of service stations and movie cinemas in the 1920s and 1930s. This style evoked the Hollywood romance and glamour attached to the motor car in the inter-war period (Kirk & Martin 2006).

The original land sale prohibited using the land as a public parking area for motor vehicles. A deed poll of 1 October 1929 was signed with the subdividers which released the land from this restriction, since the existing building was already in use as a motor garage, filling and service station (CT 4317 f 87). The Sands Directory of 1930 recorded that W Evans operated a motor garage and service station at the intersection of Botany Road and Gardeners Road (Sands, Directory, 1930, p 130).

Mary Gearin had plans to sell the service station. The real estate firm of Stanton and Son advertised the Whiteway Service Station, at the corner of Botany Road and Gardeners Road, for sale on May 1930 (SMH, 26 April 1930, p 10). No later sale advertisement has been found, which implies Mary Elsie Gearin changed her mind. In 1931 and 1933, the Advanx Tyre-pair Co ran the service station at this site (Sands, Directory, 1931, p 130; 1932-3, p 130).

When the property was re-valued on 1 October 1930, the assessment records that the subject lot 15, otherwise known as 684 Botany Road, contained a service station and garage, a detached brick building with an iron roof, and 6 bowser pumps (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, no 191).

By 1936 the Wise Directory records that the building, then known as the Civic Service Station, was operating at the corner of Botany and Gardeners Roads (Wise, Directory, 1936, p 164). The garage was still listed at this location by 1947 (Wise, Directory, 1947, p 198).

Mary Elsie Gearin owned the garage for many years until 30 September 1955, when it was transferred to the Anglo United Petroleum Ltd (CT 4317 f 87). The premises were then used for motor reconditioning and for selling used cars, as a panel and spray-painting shop as well as a garage.

On 21 June 1974, the property was transferred to McFee Construction Engineering Pty Ltd (CT 4317 f 87). The building was used as a panel beater and spray-painting shop and garage, for the manufacture and repair of radio and electrical equipment and to manufacture furniture (684 Botany Road, Street cards, NSCA; CT 4317 f 87).

Themes: National theme

3. Economy

3. Economy

State theme

Transport

Commerce

Local theme

motor car

Service station/garage

Designer: Unknown

Builder: Unknown

Year started:

Year completed: 1929

Circa: Yes

Item name: Former White Way service station including interiors

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Physical description: The building was constructed in 1929 as a two-storey service station with upper level residence. The building is set back from Botany Road behind an open forecourt area, where petrol bowsers were originally located.

The building was designed in the inter-war Spanish Mission architectural style. It retains typical elements of this style including its symmetrical facade, decorative curved parapet, grouped arched openings and stucco finish with exaggerated texture applied to brick walls.

The parapet wall features two large original arches, and a central arch that is likely an addition revealed by its different edge profile. Single-arched windows are located beneath each parapet arch, flanking a central bank of three arched opening. A skillion roof, clad with corrugated iron, shelters the open forecourt. Side walls flank the open courtyard, which are finished with similar decorative elements as the main facade. Ground floor fenestration appear to be later aluminium installations.

The building's prominent corner position and distinctive architecture make the building a local landmark. It marks the junction of two main roads of Gardeners and Botany Road and is highly visible from a number of near and distant vantage points.

The roof, foundations and floor structures have not been inspected by the authors.

Category: Individual building. Style: Inter-war Spanish Mission. Storeys: Two. Facade: Textured render.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Modification dates: 26 August 1929

Certificate of title issued for lot 15, DP 16027, to Mary Elsie Gearin, wife of Michael Gearin, junior, merchant of Sydney

2 October 1929

Site mortgaged

1 October 1929

Deed poll releasing the use of the land from restrictions against using the area as a public parking area for motor vehicles

1930

Directory showed W Evans, motor garage and service station where Botany Road meets Gardeners Road

6 May 1930

Stanton and Son were to offer the Whiteway Service station, corner Botany Road and Gardeners Road, for sale

1 October 1930

Revaluation shows lot 15 (684 Botany Road) occupied by a service station and garage with a detached brick building with an iron roof and 6 bowser pumps

1931 and 1932-33

Advanx Tyre-pair Co, service station

1936

Directory records site as Civic Service Station, corner of Botany Road and Gardeners Road

9 July 1937

Lease to Harold Charles Osborne, service station proprietor of Sydney

1947

Directory records Civic Service Station, corner of Botany Road and Gardeners Road

30 September 1955

Ownership transferred to Anglo United Petroleum Ltd

23 December 1955

Lease of part to Ronald Hosking, motor reconditioner of Rosebery

20 July 1960

Proposed use for selling second-hand cars

7 July 1967

Application to use building as a tire service station by Claude Neon Ltd

20 April 1972

Application to use building for panel beating and spray-painting and tyre repairs by Parone Investments Pty Ltd

21 June 1974

Ownership transfer to McFee Construction Engineering Pty Ltd

4 November 1974

Application to use building for belt sales and electronics Inflo Belt Weighers Pty Ltd

Item name: Former White Way service station including interiors

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21 December 1979

Ownership transferred to John Bajioz, engineer of Waverley and his wife, Helen and Laszlo Illes, panel beater of Erskineville and his wife Valeria

18 September 1979

Application to use building for panel beating and spray-painting by John Bajioz, and Laszlo Illes

22 October 1980

Security Shack Pty Ltd apply to use building to manufacture and repair radio and electrical equipment

26 March 1981

Ownership transferred to Vaisselle Pty Ltd

1 March 1983

Application to use building as motor garage by Vaisselle Pty Ltd

20 June 1983

Application to use building for panel beating and spray-painting

11 July 1983

Application to use building for manufacturing furniture by Constantine Kitchens

Recommended management: In recent years, the petrol pumps and tanks have been removed and filled in but their footprints are still visible. The building should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

The curved parapet wall, arched openings, textured rendered finish, side walls, open fourcourt and other original features of the former service station should be maintained and conserved.

Minimise or relocate signage so that it does not dominate or obstruct views to the building and better integrates with its historic architectural features.

For repainting, use a colour scheme appropriate to the inter-war period of the building, which highlights its decorative details in different tones.

Consider new uses for the building that will re-use and expose its service station features to retain its inter-war character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): Built in 1929 as a purpose-built service station, the former White Way service station represents the growth of new industries in Alexandria during the twentieth century, specifically for the automobile industry.

[Historical significance]

The building provides evidence of the growing use of the motor car during the twentieth century, which had a profound impact not only on industry, but also on Sydney's development, environment and culture.

The service station also represents the early period of petrol supply through independent service operators, which were largely replaced by chain petrol stations associated with the oil companies by the 1950s.

The former White Way service station forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The service station is associated with its original owner, Mary Elsie Gearin, from 1929 to the 1950s, and a number of garage operators who ran the building as a service station during this period. From this time and into the 1970s when it was converted to other uses, the building has a long association with the motor car industry for a large part of the twentieth century.

[Historical association significance]

Criteria c): While altered, the building is still recognisable as an example of an inter-war service station designed in the Spanish Mission style. The building exhibits typical features of inter-war service stations of this style, including the integrated upper level residence, the curved decorative parapet, groups of arched openings and exaggerated texture applied to brick walls. The use of this flamboyant style inspired by Hollywood movies for a modest utilitarian building, demonstrates the glamour attached to motor cars at the time.

[Aesthetic/Technical significance]

With its prominent corner position at the junction of two main roads and distinctive architecture, the building also represents a local landmark. The former service station makes an important contribution to the streetscapes of Gardeners and Botany Roads and is highly visible from a number of near and distant vantage points.

Criteria d): Social significance requires further study to ascertain its value to communities. The building's landmark qualities in the local neighbourhood may have value to the local community as a point of reference and tangible connection to the early automobile industry in Alexandria.

[Social/Cultural significance]

Criteria e):

[Research significance]

Criteria f): The building is a rare surviving example of an inter-war Spanish Mission service station within the City of Sydney

[Rarity]

Criteria g): The building is a representative example of a garage from the inter-war period designed in the Spanish Mission style.

[Representative]

Intactness/Integrity: While some decorative details and petrol pumps have been removed, the building is still recognisable as an inter-war service station.

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

References:	Author	Title	Year
	RTA	Aerial Photographs of Sydney May-June 1943	1943
	City of Sydney/ City Building Surveyors	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria Sydney	1890
	Higinbotham & Robinson	Waterloo Sydney	1890
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	Ian Kirk and Megan Martin	Study of inter-war garages and service stations in New South W	2006

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial and Warehouse Buildings Heritage		2014
	Ian Kirk and Megan Martin	Mar Study of Inter-war Garages and Service Stations in NSW		2006

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	15		DP	16027

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Warehouse	Heritage study		

Data entry: Data first entered: 26/08/2014

Data updated: 13/05/2015

Status: Completed

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Image:



Caption: Former service station in 2014

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345c48c29795a49417eac6a53df0b2a895b.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345c48c29795a49417eac6a53df0b2a895b.JPG

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Image:



Caption: Oblique view of street elevation from Botany Road, showing textured side walls

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3454e06f55626214eb464ab79a9d762c6.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3454e06f55626214eb464ab79a9d762c6.JPG

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Image:



Caption: The service station in 1960, then called the Civic Service Station

Copy right: City of Sydney archives

Image by:

Image date: 01/03/1960

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345280cc0a3d10041758d7ba53624ae7275.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345280cc0a3d10041758d7ba53624ae7275.jpg

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Image:



Caption: Former service station in 2006, as published in the service station study

Copy right:

Image by: Ian Kirk & Megan Martin

Image date: 01/09/2006

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3458c3f34db12804eada0401f8ba70b16cc.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3458c3f34db12804eada0401f8ba70b16cc.jpg

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Image:



Caption: 1928 subdivision plan of the Birmingham Estate "the hub of industrial activity"

Copy right: State Library of NSW

Image by: State Library of NSW, a9617005

Image date: 08/12/1928

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3451257a57352be46a6bb8d3e91346e4c6d.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3451257a57352be46a6bb8d3e91346e4c6d.jpg

Item name: Former White Way service station including interiors

Location: 684 Botany Road Alexandria 2015

Sydney

Image:



Caption: 1935 subdivision plan of Birmingham Estate showing subject garage

Copy right: State Library of NSW

Image by: State Library of NSW

Image date: 19/01/1935

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34533c3cf5f308241c3a6d5729f22d1f6db.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34533c3cf5f308241c3a6d5729f22d1f6db.jpg

Inventory 11

Item name: Former Q Store including interiors**Location:** 47-49 Bourke Road Alexandria 2015

Sydney

Address: 47-49 Bourke Road**Planning:** Sydney South**Suburb/nearest town:** Alexandria 2015**Local govt area:** Sydney**State:** NSW**Parish:****County:****Other/former names:** Government Stores**Area/group/complex:****Group ID:****Aboriginal area:** Eora**Curtilage/boundary:** As described in Sydney Local Environmental Plan**Item type:** Built**Group:** Manufacturing and Processing**Category:** Other - Manufacturing & Processing**Owner:** Private - Corporate**Admin codes:****Code 2:****Code 3:****Current use:** Industrial units**Former uses:** Industrial/warehouse**Assessed significance:** Local**Endorsed significance:**

Statement of significance: Purpose-built as a store for the New South Wales government in 1970, the Q Store represents the later period of industrial development in Alexandria for large-scale government warehousing along the Alexandra Canal. This modern building demonstrates the next phase of government stores development following the World War II construction of large wool sheds along the canal located behind this site. It provides evidence of the continued need for government storage along the Alexandra Canal during the second half of the twentieth century from the last major phase of industrial development in southern Sydney before industry declined in the area.

Architecturally, the Q Store represents a rare example of an industrial building designed by prominent Australian architect, Harry Seidler, and a fine example of a warehouse in the post-war international style. The Q Store demonstrates Seidler's modernist design philosophy applied to an industrial building; one of only three industrial buildings or warehouses in Seidler's career. The dynamic building structure illustrates Seidler's creative solution for providing large open spaces for flexible storage and moving equipment and glare-free internal lighting, particularly the use of a tetrahedron structural system for the roof, tapering concrete columns and the highlight glazing.

With its distinctive, visually-striking and cohesive architecture, the building makes an important contribution to the streetscape of Bourke Street. The building is a local landmark in Alexandria, with few, if any, comparisons in the neighbourhood.

The adaptive re-use of the building in 2009 for technology industry units designed by Lacoste + Stevenson respected and retained the integrity of Seidler's original design.

The Q Store forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The Q Store is of local heritage significance in terms of its historical, association, aesthetic, rarity and representative values.

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Location: 47-49 Bourke Road Alexandria 2015

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Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

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were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

The high tariff wall imposed by government during the twentieth century to foster local manufacturing was an important driver of industrialisation and manufacturing up until the 1980s. Thereafter, manufacturing declined. Within the Greater Sydney area, the demise of industry was especially marked in the City of Sydney as traditional industries relocated to outer suburbs or closed down operations.

Historical summary of the site:

The Q Store was constructed in 1969 as a store building for the New South Wales government. The building was designed by the prominent Australian architect, Harry Seidler, in the post-war international style.

The Q store is located in close proximity to the Alexandra Canal on land that was formerly part of the adjacent James Barnes industrial site. The James Barnes factory manufactured linseed oil and meal mill from approximately 1917. Its factory site once included the properties from 41 to 63 Bourke Road.

Large stretches of surrounding land adjoining the Alexandra Canal were also publicly-owned and used for similar storage or war-related industrial purposes during the second half of the twentieth century. Behind the subject site, timber wool sheds were built by the Commonwealth Government during World War II, on the banks of the Alexandra Canal, to stockpile wool until exports could resume. After the war, the wool sheds were transferred to the NSW Government and used for storage. The neighbouring property to the south of the Q store was also government-owned by the Commonwealth Department of Aircraft Production, as recorded in the 1950s surveys.

In 1963 the subject land was transferred into public ownership as Crown land. Land title records show that the subject land comprising an area of 4 acres 1 rood 35 perches on Bourke Road was conveyed by James Barnes Pty Ltd to Her Majesty Queen Elizabeth II for £180,000 on 18 October 1963 (Old System Deed, 458 Bk 2677).

As a modern building also custom-built as government stores located close to the wool sheds along Alexandra Canal, the Q Store demonstrates the next phase of large-scale government warehousing in a radically different style. Unlike the wool sheds which were rapidly constructed in timber using an assembly line technique developed by Stuart Bros to meet the huge demand for stores during the war, the Q store was a permanent architect-designed structure.

From 1964-68, Harry Seidler was engaged to design the Q Stores (Peter Blake, *Architecture for the new world: The work of Harry Seidler, Horwitz, Sydney, 1973*, p 102). Harry Seidler designed only three industrial or warehouse structures in his whole career, out of his work of approximately 180 buildings.

The client, the New South Wales Government stores, required 150,000 square feet (13.935 square metres) of storage area and a height of 20 feet (6 metres), minimal structural columns and good lighting (NSW Public Works Department, Annual Report, 1967-8, pp 47-8). The building was estimated to cost \$1,983,400 (NSW Public Works Department, Annual Report, 1968-9, p 42). The building required large open spaces for flexible storage and easy movement for equipment (<http://lacoste-stevenson.com.au/new-life-for-q-store/>, accessed 2 Sept 2014).

To meet the specific needs of his client, Seidler devised a creative solution that grew out of his modernist design philosophy that created a visually-striking and functional design for a utilitarian building. Seidler devised a triangular-framed tetrahedron roof structure with 100 feet (30 metres) spans to facilitate easy movement across the spaces. This frame was able to support a large roof area with only eight tapering columns interrupting the

Item name: Former Q Store including interiors

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spaces. It also enabled services to be easily inserted. Precast concrete was used for the exterior. Glass provided adequate lighting. A shaded roof enabled maximum internal light without the direct glare of the sun. (Peter Blake, Architecture for the new world: The work of Harry Seidler, Horwitz, Sydney, 1973, p 102)

Since the new building was built for the state government, the NSW Government Printers Office exhaustively photographed the process of construction.

In 2008 the bridge which originally connected the store to the woolsheds beside Alexandria canal was removed.

In 2009 the new owners, Goodman, adapted the building as units for high technology industry occupiers. Although the building was not heritage listed at the time, the architectural firm engaged for the adaptation, Lacoste + Stevenson, designed the new works to respect Seidler's original design (<http://lacoste-stevenson.com.au/new-life-for-q-store/>, accessed 2 Sept 2014).

Themes:	National theme	State theme	Local theme
	3. Economy	Commerce	Warehouses
	3. Economy	Industry	Warehouses

Designer: Harry Seidler (1965-70 construction), Lacoste + Stevenson Architects (2009 conversion)

Builder: Unknown

Year started: 1965

Year completed: 1970

Circa: No

Physical description: The Q Store was constructed in 1970 to the design of Harry Seidler for the NSW Government. It comprises a substantial stores building with high internal clearances, measuring approximately 100 metres and 3 bays wide and 180 metres and 5 bays long.

The building is designed in the post-war international architectural style. It contains some impressive elements of the this style adapted to an industrial building, particularly the use of the tetrahedron structural system for the roof (also known as a space frame), tapered concrete columns and highlight glazing.

The building is constructed of a prefabricated steel space frame for the roof, concrete floors with exposed aggregate pre-cast concrete wall panels set behind tapered concrete columns along the perimeter. The overhanging eaves are covered with a ribbed metal fascia. U-shaped moulded glass panels at the top of the walls provide natural light for the interiors, which is further enhanced by 10x4 pop-up skylight inserts in the roof.

The windows to the front service area are aluminium frames. Loading docks are located at the rear. Internally, four amenity and service blocks are located at the four corners of the building.

The building is set back from Bourke Road and closely abuts the woolsheds to the rear. The bridge which originally connected the store to the woolsheds beside Alexandria canal was removed in 2008.

A concrete canopy gatehouse located at the 6A Huntley Street entrance to the site was also designed by Seidler.

The building has been adaptively reused as high-technology industry units by Goodman to the design of Lacoste + Stevenson Architects. The works for this conversion retained the integrity of Seidler's original design.

Category: Individual building. Style: Post-war international. Storeys: One to three. External walls: Pre-cast concrete, glazed and perforated steel. Roof: Space frame supported by tapered concrete columns.

Physical condition level: Good

Physical condition:

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

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Archaeological potential level: Not assessed

Archaeological potential Detail: 1943 aerial shows former buildings on the site. 1950s survey plan records a former building on the south-west quarter of the property when it formed part of the large James Barnes industrial site from 41-49 Bourke Road.

Modification dates: Timeline of known dates for changes to the site:

18 October 1963

Conveyance, James Barnes Pty Ltd to Her Majesty Queen Elizabeth II, of 4 acres 1 rood 35 perches on Bourke Road, for £180,000.

1964-8

Harry Seidler designed the NSW Government Stores building in Alexandria.

2008

Bridge connecting the store to the woolsheds beside Alexandria canal was removed.

2009

New owners, Goodman, adapted the building into high technology industry units.

Recommended management: The building should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Original architectural features should be maintained and conserved.

Avoid vertical additions to the building or other alterations that will obstruct or dominate original architectural features, internally or externally.

Consider new uses for the building that will re-use and expose its original architectural features to retain its former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

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Criteria a): Purpose-built as a store for the New South Wales government in 1970, the Q Store represents the later period of industrial development in Alexandria for large-scale government warehousing along the Alexandra Canal.
[Historical significance]

This modern building demonstrates the next phase of government stores development following the World War II construction of large woolsheds along the canal located behind this site. It provides evidence of the continued need for government storage along the Alexandra Canal during the second half of the twentieth century from the last major phase of industrial development in southern Sydney before industry declined in the area.

The Q Store also demonstrates the development of modern Australian architecture as a rare example of an industrial design in the work of prominent Australian architect, Harry Seidler.

The Q Store forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Criteria b): The Q Store has significant associations with Harry Seidler, an internationally renowned modernist Australian architect. It is a rare example of only three known industrial or warehouse buildings designed by Seidler out of approximately 180 works in his career.
[Historical association significance]

Criteria c): Architecturally, the Q Store represents a rare example of an industrial building designed by prominent Australian architect, Harry Seidler, and a fine example of a warehouse in the post-war international style. The Q Store demonstrates Seidler's modernist design philosophy applied to an industrial building; one of only three industrial buildings or warehouses in Seidler's career. The dynamic building structure illustrates Seidler's creative solution for providing large open spaces for flexible storage and moving equipment and glare-free internal lighting, particularly the use of a tetrahedron structural system for the roof, tapering concrete columns and the highlight glazing.
[Aesthetic/Technical significance]

With its distinctive, visually-striking and cohesive architecture, the building makes an important contribution to the streetscape of Bourke Street. The building is a local landmark in Alexandria, with few, if any, comparisons in the neighbourhood.

The adaptive re-use of the building in 2009 for technology industry units designed by Lacoste + Stevenson respected and retained the integrity of Seidler's original design.

Criteria d): Social significance requires further study to ascertain its value to communities. It may have some value to former workers of the government store. Its design by a prominent Australian architect may also have value to the architectural community and people with an interest in modern Australian architecture or the career of Harry Seidler.
[Social/Cultural significance]

Criteria e): This building provides an opportunity for understanding the development of modern industrial building design and post-war technology, in particular the use of a space frame for the roof structure, the tapering concrete columns and the u-shaped type of glazing used for highlighting.
[Research significance]

Criteria f): The Q Store is a rare example of a warehouse designed by the prominent Australian architect, Harry Seidler; one of only three industrial or warehouses in his career.
[Rarity]

Criteria g): The Q Store represents a fine example of a warehouse in the post-war international architectural style and the industrial work of prominent Australian architect, Harry Seidler.
[Representative]

Intactness/Integrity: Intact structurally

Item name: Former Q Store including interiors**Location:** 47-49 Bourke Road Alexandria 2015

Sydney

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	Lacoste + Stevenson	New Life for Seidler's Q Store	2010
	Helen O'Neill	A singular vision. Harry Seidler.	2013
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Heritage Group NSW Department of P	Sheas Creek Woolsheds Conservation Management Plan	1999

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
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Latitude:**Longitude:****Location validity:****Spatial accuracy:****Map name:****Map scale:****AMG zone:****Easting:****Northing:**

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Warehouse	Heritage study		
	Q Store	Royal Australian Institute of Architects register	4703257	

Data entry: Data first entered: 05/08/2014 Data updated: 14/05/2015 Status: Completed

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, exterior (2014)

Copy right:

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34563e1b8a64e9e4210b949b58e59a4136c.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34563e1b8a64e9e4210b949b58e59a4136c.JPG

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, Bourke Road exterior (2014)

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345dd872c53bf4747738a54491584297070.JPG>

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Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, interior (2009)

Copy right: Lacoste + Stevenson

Image by: Lacoste + Stevenson

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345f502c811aa7b4587929ae73524628930.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345f502c811aa7b4587929ae73524628930.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, carpark interior (2009)

Copy right: Lacoste + Stevenson

Image by: Lacoste + Stevenson

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345fb34660a6423476e830ab2dcc09568ac.jpg>

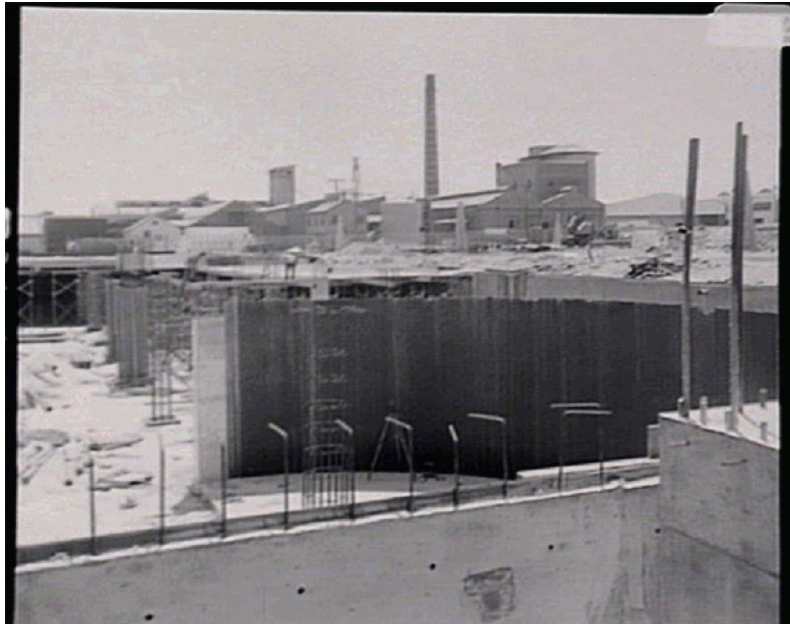
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345fb34660a6423476e830ab2dcc09568ac.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, during construction in 1969, SLNSW, d2_35663

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 29/01/1969

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a7d71951d65d4c589f513d95f7cd6f57.jpg>

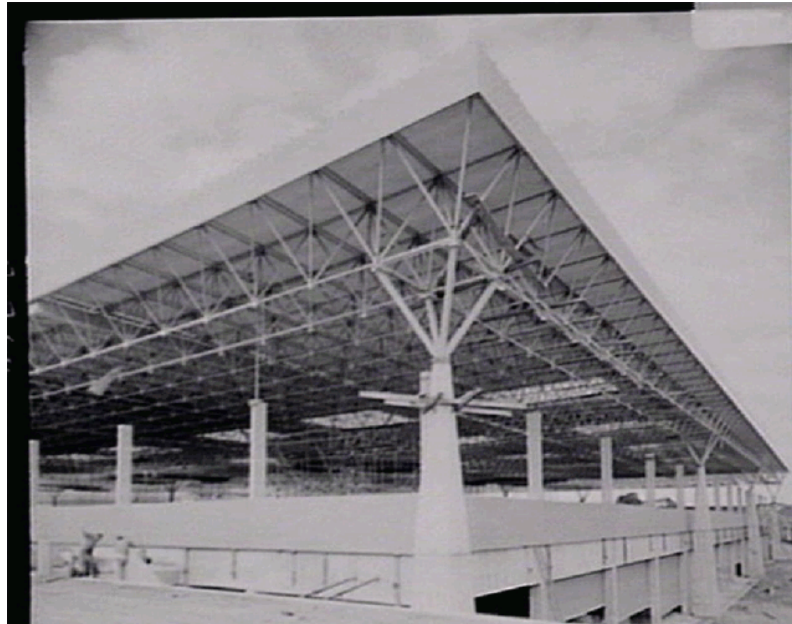
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a7d71951d65d4c589f513d95f7cd6f57.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, during construction in 1969, SLNSW, d2_45177

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 03/09/1969

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3452db64c4c444d4204a913b93581e3aaad.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3452db64c4c444d4204a913b93581e3aaad.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, exterior, shortly after construction (1970), SLNSW, d2_39293

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 07/10/1970

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a58a313765c6474880bae8f8d3201e87.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a58a313765c6474880bae8f8d3201e87.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q Stores, original entrance in 1971, SLNSW, d2_44429

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 01/12/1971

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455f4099aff07342dabc4fc25743420aaf.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3455f4099aff07342dabc4fc25743420aaf.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q stores, rear, in 1969 shortly after construction showing bridge to wool stores, SLNSW, d2_45575

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 03/12/1969

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34518adf5f05a624974aef3fbc4f9f71c4f.jpg>

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Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q stores, rear bridge to wool stores, in 1969 shortly after construction, SLNSW, d2_45576

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 03/12/1969

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3459522ac4dfd6648e78fea07d467233506.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3459522ac4dfd6648e78fea07d467233506.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: The Q Store, internal view, in 1969 shortly after construction, SLNSW, d2_43971

Copy right: State Library of NSW

Image by: Government Printing Office

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3450e033860131248fa9c0159af963b546b.jpg>

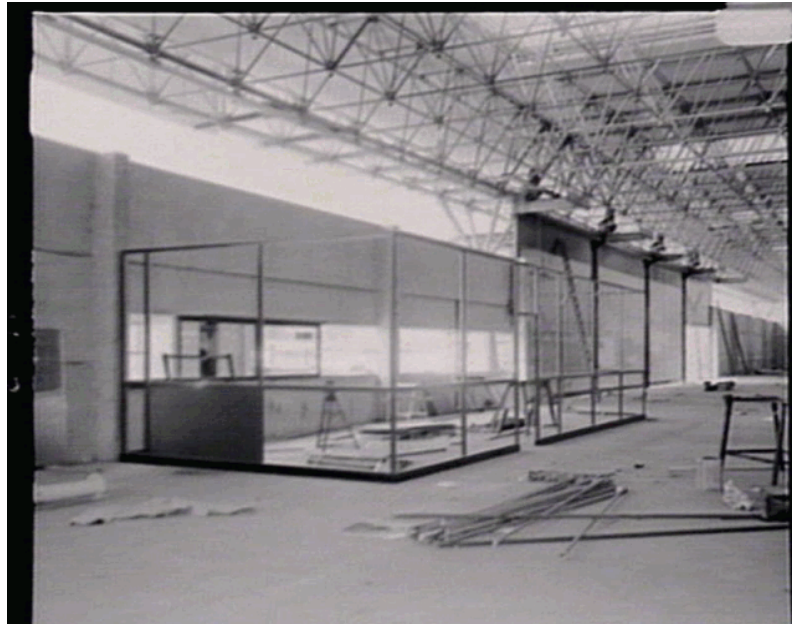
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Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q stores, interior fitout, 1970, SLNSW, d2_48871

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 01/05/1970

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a41a140fb24041578f7da2da18351d65.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a41a140fb24041578f7da2da18351d65.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q Stores, interiors, in use in 1971, SLNSW, d2_44427

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 01/12/1971

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345cfd3e4cca2ad47be8ad26d42b6fe06bd.jpg>

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Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q Stores, interiors, in use in 1971, SLNSW, d2_44428

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 01/12/1971

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34502e7c1242b5d4608b2c1186408866d9a.jpg>

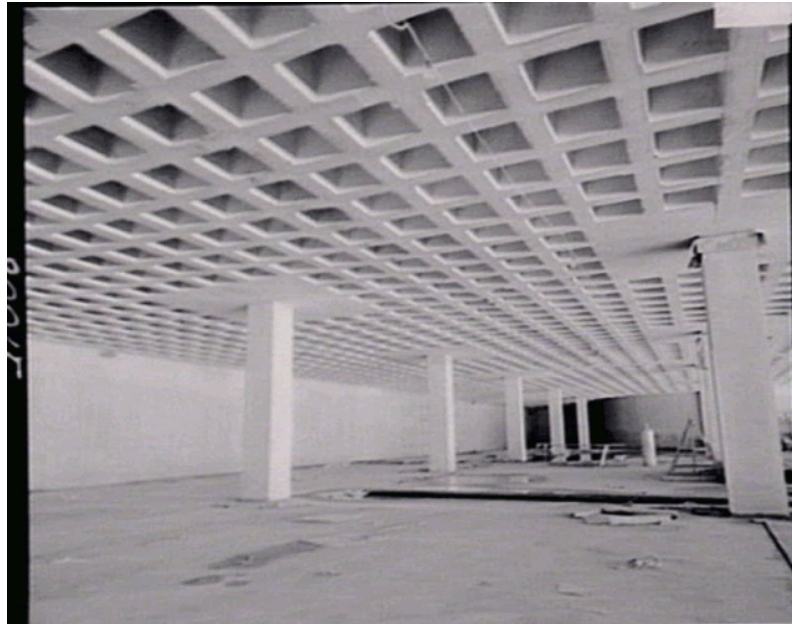
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Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: Q Stores, interiors, under construction in 1969, SLNSW, d2_37047

Copy right: State Library of NSW

Image by: Government Printing Office

Image date: 01/04/1969

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3453118573842ee4840883fdf7a6f4515a4.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3453118573842ee4840883fdf7a6f4515a4.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1943 aerial photo showing buildings on the site before Q store, with an overlay showing land parcels

Copy right: NSW Land and Property Information, SIX

Image by: RTA

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345e0df66eb5e274111a9173cfa67ec879a.png>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/P/Thumb_test345e0df66eb5e274111a9173cfa67ec879a.png

Sydney

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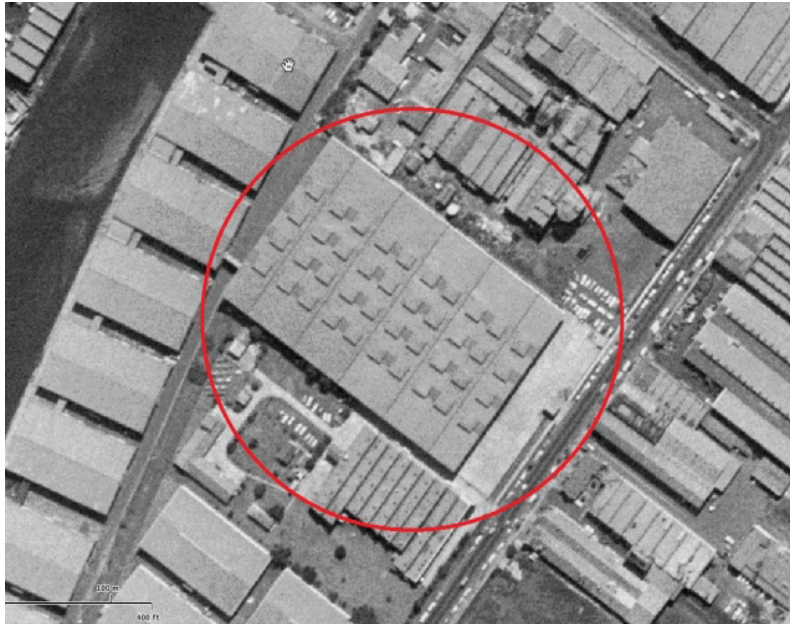
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test345fb3b78aca8fe4c17aafa901931b85f51.jpg

Item name: Former Q Store including interiors

Location: 47-49 Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1975 aerial photograph showing the constructed Q store, its roof, pop-up skylights and rear bridge

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1975

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345c7de43ae089246b584311d8b419ce9eb.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345c7de43ae089246b584311d8b419ce9eb.jpg

Inventory 12

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Address: 138-196 (160) Bourke Road

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish:

State: NSW

County:

Other/former names: Sydney Corporate Park, Commonwealth Oxygen & Acetylene Pty Ltd, CIG, oxygen works, oxygen plant, demonstration build

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: Only former oxygen factory and demonstration block buildings, as described in Sydney Local Environmental Plan

Item type: Built

Group: Manufacturing and Processing

Category: Other - Manufacturing & Processing

Owner: Multiple Owners

Admin codes:

Code 2:

Code 3:

Current use: Mixed use

Former uses: Factory and demonstration block

Assessed significance: Local

Endorsed significance:

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Statement of significance: Built in 1939-1943 for the major Australian compressed gas manufacturers, Commonwealth Industrial Gases, the two extant buildings on this site represent the large-scale industrial development of Alexandria during the mid-twentieth century. The former oxygen factory and demonstration block represent the two most intact substantial buildings surviving from the Commonwealth Industrial Gases use of this site from 1939 until the 1970s.

The buildings are historically significant for their connection to the Australian manufacturing of compressed gases used for medical, industrial, construction and commercial purposes throughout New South Wales from 1939 to the 1970s. The factory provides evidence of the twentieth-century development of science and technology in Australia, in particular the growing use of compressed gases for industry, medical care and construction, and associated innovations. Innovative techniques and products made at this factory included humidicribs for premature babies, new methods for joining and cutting metal and spray-painting. The acetylene produced at this factory was essential for welding and flame-cutting of metals. The factory also represents the source of products used in everyday Australian lives, such as the carbon dioxide for making soda.

The scale of the buildings, the period of their construction, and the commissioning of architects for their design indicate the importance of gases as a key material for industry and construction at this time. The extension of these buildings record the growing use of gasses during the twentieth century.

Architecturally, these buildings represent good examples of the mid-twentieth century industrial work of prominent architects, Robertson and Marks. They also demonstrate buildings purpose-designed to suit the gas manufacturing process and demonstration of technology using these gases. The design of both buildings exhibit typical features of the inter functionalist-style applied to utilitarian buildings including geometric building forms that are robust, simple and solid, face brick walls and sawtooth roofs concealed behind a parapet wall. While generally unadorned as is typical for utilitarian buildings, the face-brick walls are relieved by geometric patterns of decorative brickwork for the parapet wall, string courses, and evenly spaced downpipes and rainwater funnels.

The later conversion of the factory and demonstration block and new buildings constructed on this site for Sydney Corporate Park have retained the overall integrity of these two buildings.

As a significant employer in the local area for its operations from 1939 to the 1970s, the site and these buildings are likely to have social value to its former workers and their families, which historic records suggest was a strong and active community.

In terms of research potential, the buildings could provide information about the evolving design of twentieth century gas manufacturing plants, in particular for oxygen production. The design of these two buildings could also yield further information on the work of the noted architectural firm, Robertson & Marks, and the evolution of their work within the first fifty years of practice.

The former Commonwealth Industrial Gases buildings forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former Commonwealth Industrial Gases factory and demonstration block are of local heritage significance in terms of their historic, association, aesthetic, research, rarity and representative values in the local government area.

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Robertson & Marks history:

The prominent Sydney architects, Robertson & Marks, was established in 1892 and continues to practice today as Robertson & Marks Pty Ltd. The original partners were George Birrell Robertson and Theodore John Marks. Struan Robertson inherited both partners' shares upon their deaths in 1913 and 1941. John Trevor Guy joined the practice in 1940.

Much of the practice's early work was connected with racing due to the connections of the partner, Theodore Marks. Marks was a member of the Australian Jockey Club (AJC) from 1893, an original shareholder in the Victoria Park Racing and Recreation Grounds Co Ltd for pony-racing, and chairman of the Rosehill Racing Club between 1919-41. Marks designed many of the buildings and alterations at Randwick and Warwick Farm Racecourses for the AJC in 1922 and the since demolished Leger Stand at Rosehill (1920), amongst others.

Robertson & Marks designed a large number of significant buildings in Sydney. Between 1892 and 1941 these works included the: Edwards Dunlop & Dunlop Warehouses, Kent Street (1901); Briscoe & Co Ltd bulk store, Ultimo (1901); W. Horace Friend Warehouse, Clarence Street (1906); Oswald Sealy Building, Clarence Street (1906); Richardson & Co Emporium, Armidale (1908); the original Challis House, Martin Place (1908); Perpetual Trustee Co, Hunter Street (1917); Daily Telegraph Building, King Street, with Samuel Lipson (1912-16, 1934); Prouds Ltd, Pitt Street (1920); Hotel Australia Rowe Street wing (1923); Warwick Farm Racecourse grandstand (1925), Bank of NSW head office, Martin Place (1927-32); Mercantile Mutual Building, Pitt Street (1929); Asbestos House, York Street, with John Reid & Sons (1930-5); and the AWA Building, York Street, as Robertson, Marks & McCredie with Morrow & Gordo (1937-39).

In its earlier days, the practice also designed numerous houses for the elite of Sydney society, including: 'Goondie', Wahroonga (1897); 'Glensley', Turramurra (1897); 'Gorawin', Killara (1903); Brunton house, Bellevue Hill (1904); 'Heverlee', Wahroonga (1904); and 'Wanstead' (Gowing), Lindfield (1911).

The architectural styles of the firm changed both with time and the building type. Their major commercial buildings in the early years of the century were bold Federation warehouses with Romanesque arches at either ground or top floor level. The arches gave way to a simple rectilinear, trabeated facade treatment in later warehouses and offices. During the inter-war period, the firm's large Sydney buildings demonstrated a number of inter-war styles including the commercial palazzo style (Farmer & Co. department store, Market Street, 1920, and Gowings Bros Building, Market Street, 1912-29, with C.H. Mackellar), inter-war functionalist (S.H. Hoffnung & Co. Building, 1939, with Samuel Lipson) and restrained inter-war Mediterranean styles (Bondi Surf Pavilion, Bondi Beach, 1930 with L. McCredie). (Robertson, 2011)

Historical summary of the site:

By the 1930s, gas became a key material used for modern industry and construction. The Commonwealth Industrial Gases works at Bourke Road, Alexandria, was the major plant producing compressed gases for medicine, industry, construction and commerce in NSW from 1939 until about 1975. The site was a key component of the company's network of factories in major cities across Australia. The subject two factory buildings were constructed between 1939 and 1943 and extended in the 1940s-1960s for the Commonwealth Industrial Gases works factory. The main brick building was constructed as an oxygen factory, also described as an oxygen plant or oxygen works. The adjacent smaller building was constructed as demonstration block.

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

The main gases produced at this factory included oxygen, acetylene, nitrogen, argon, hydrogen and compressed dry air. The acetylene produced at this factory was essential for welding and flame-cutting of metals. The introduction of acetylene welding was a major step forward. It replaced the slow and tedious process of riveting for joining metal, ensuring quicker production and the final product was lighter without the additional weight of the rivets. The oxygen produced by Commonwealth Industrial Gases had numerous applications, including medicine and safety breathing apparatus.

In January 1939, the Commonwealth Oxygen and Acetylene Pty Ltd, the NSW branch of Commonwealth Industrial Gases Ltd, moved to this new site from their original works in Foy Street, Balmain (Alexandria: "The Birmingham of Australia" p 84-6). The Certificate of Title for 10 acres on the eastern side of Bourke Street south of Doody Street was issued to Commonwealth Oxygen & Acetylene Pty Ltd on 28 January 1938 (CT 4904 f 22).

Construction began shortly afterwards. On 15 February 1938, it was announced that contracts had been let to erect 'a large factory premises at Alexandria' for Commonwealth Oxygen and Acetylene Pty Ltd (SMH, 15 Feb 1938 p 7). The contract was let by architects Robertson and Marks in November 1939 to S C Molineaux Pty Ltd, Roseville, to erect three buildings at Alexandria for Commonwealth Oxygen and Acetylene Pty Ltd (SMH, 14 Nov 1939 p 3). In December 1939, they let contracts to S C Molineaux, Roseville, to erect a demonstration and showroom for the company (SMH, 12 Dec 1939 p 5). Robertson and Marks was a noted architectural firm, which designed numerous buildings around Sydney and NSW. A number of the buildings they have designed are inscribed on the Australian Institute of Architecture register of significant twentieth century buildings.

By 1943, an administrative office block, oxygen works, store, laboratory, demonstration room, garages, staff lunchrooms and change facilities had been constructed on the site.

The company employed 200 people by 1943. It supplied equipment for gas and electric welding, as well as gases for medical purposes, mine rescue work apparatus and carbon dioxide for soda production. Their company slogan was "everything for the welder from one source of supply" (Alexandria: "The Birmingham of Australia" p 84-6). A 1943 aerial photograph records the office building located on Bourke Road, a sawtooth roofed building on Doody Street and the two subject buildings with sawtooth roofs located further within the site (1943 Aerial photo SIX, LPI).

The 1945 workplace survey records that Commonwealth Oxygen and Acetylene Pty Ltd used electrical equipment rated at 1118 hp to produce industrial gases, and that the company employed 131 staff at this time (SRNSW 7/6847).

The company name was changed to CIG (New South Wales) Pty Ltd by 30 July 1947 (CT 4904 f 22). On 18 April 1975, the property on Bourke Road was transferred to Commonwealth Industrial Gases Ltd (CT 4904 f 22).

The company continued to expand and add to the manufacturing plant on the site. An application for new buildings to manufacture acetylene gas was submitted on 23 September 1949. Robertson and Marks also designed these additional buildings. On 31 July 1950, they proposed to construct new buildings with works valued at £68,000. On 5 September 1950, Robertson and Marks proposed four new store buildings. These works were estimated at £26,816. F T Eastment and Sons applied on 15 April 1957 to build a new office block at an estimated cost of £222,420 (138 Bourke Street, Street Cards, NSCA).

1950 and 1954 site plans that accompanied two of these applications (for the 4 new store buildings in 1950, and the medical gases building for oxygen and acetylene works in 1954) record the footprint and function of buildings constructed on this site at this time. This includes the two subject buildings noted in these drawings as 'oxygen works' or 'oxygen factory' and 'demonstration block' or 'demonstration building'. The drawings note the oxygen factory then contained a cylinder filling dock at the northern end, a southern extension, the engine room in the main volume of the factory, and an intercepting pit located on its eastern edge. At the rear of the demonstration building, a path then connected it to the office building fronting Bourke Road.

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Other buildings shown as constructed by 1954 include the office building fronting Bourke Road, two store buildings fronting Doody Street, smaller services buildings to the east of the oxygen works, a long narrow garage and cylinder processing building to the south east of the oxygen works, as well as other buildings along the eastern property boundary and either side of the canal.

Photographs from the 1960s illustrate how the company documented and promoted the new technology developed at this site and how it demonstrated its products to the public, presumably within the subject demonstration block. The 1960s photos also illustrate how the company was an active community of workers, scientists and their families with company sports teams, family and other social events sponsored by the company.

On 28 November 1966, the company proposed extensions to the liquid oxygen plant with works valued at \$320,000.

On 16 October 1973, the company applied to erect a fluorocarbon facility worth \$12,500 (138 Bourke Street, Street Cards, NSCA).

Historic aerial photos record that the factory and demonstration were both approximately doubled in length with extensions to the south after 1943 and prior to 1975. These additions extended the original 8 northern sawtooth roof forms of the main factory building and the 6 northern sawtooth roof forms of the demonstration building continuing the same building form. While the main factory building retained this extension, all but two of the extra southern bays for the smaller stores building were demolished before 1979.

In 1985, F Hannan (Properties) Pty Ltd became a registered proprietor of the land on 11 April (CT 4904 f 22). On 11 June 1985, the council received an application for the construction of a new printing factory. F Hannan Properties applied on 16 February 1987 to erect a warehouse to store paper reels. On 18 October 1990, it applied for additions to create a staff training area and gymnasium worth \$350,000 (138-188 Bourke Street, Street Cards, NSCA).

Historic aerial photos record that substantial new buildings were constructed on the site by 1989. These buildings infilled open space or replaced smaller free-standing buildings located to the immediate north, east and south of the main oxygen factory building.

Themes: National theme

3. Economy

3. Economy

3. Economy

State theme

Commerce

Industry

Industry

Local theme

Warehouses

Warehouses

Activities associated with the n

Designer: Robertson & Marks

Builder: Molineaux Pty Ltd, Hutcherson Bros

Year started: 1939

Year completed: 1969

Circa: Yes

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Physical description: The two subject buildings on the larger former industrial site were built in 1939-43 and extended to the south over the next two decades for Commonwealth Industrial Gases, including the larger building originally constructed as an oxygen factory and the smaller building constructed as a demonstration block.

The former factory is double-storey in height with a single-storey section along its western length. The building measures approximately about 115 metres long and 25 metres wide. The smaller demonstration block to the west is a smaller-scale single-storey version of the same building typology, with the addition of cantilevered hoods above original openings.

Both buildings were constructed in stages from the north to the south. The earlier northern sections of these buildings are contained under the 8 northern sawtooth roof forms of the factory building and the 6 northern sawtooth roof forms of the demonstration block.

The southern extensions to these buildings during the 1940s-1960s continued the same building form of sawtooth roofs and brick walls. The former factory retained its southern extensions. The smaller demonstration block only retains two of the additional bays.

Both buildings demonstrate typical features of functionalist style industrial buildings from the mid-twentieth century including geometric building forms that are robust, simple and solid, face brick walls and sawtooth roofs concealed behind a parapet wall. While generally unadorned as is typical for utilitarian buildings, the face-brick walls are relieved by geometric patterns of decorative brickwork for the parapet wall, string courses, and evenly spaced downpipes and rainwater funnels. The absence of windows in the main factory building reflects its original custom-design for gas production and demonstration, where windows were excluded because of the risk of explosion.

Alterations and additions to both buildings for new uses have maintained the integrity of the building designs. Window and door frames have generally been replaced.

Roofs, foundations and floor structures of the buildings have not been inspected by the authors.

Category: Precinct. Style: Functionalist. Storeys: One and two. Facade: Brick. Side/rear walls: Brick.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Modification dates: Timeline of known dates for changes to the site:

28 January 1938

Certificate of title for 10 acres on the east side of Bourke Street south of Doody Street issued to Commonwealth Oxygen & Acetylene Pty Ltd

15 February 1938

Contracts let to erect 'a large factory premises at Alexandria' for Commonwealth Oxygen and Acetylene Pty Ltd

14 November 1939

Contracts let by architects Robertson and Marks to S C Molineaux Pty Ltd, Roseville, to erect three buildings at Alexandria for Commonwealth Oxygen and Acetylene Pty Ltd

12 December 1939

Contracts let by architects Robertson and Marks to S C Molineaux, Roseville, to erect demonstration and showroom for Commonwealth Oxygen and Acetylene Pty Ltd

January 1939

Commonwealth Oxygen and Acetylene Pty Ltd moved to a new site at the corner of Doody Street and Bourke Road Alexandria from their works in Foy Street, Balmain

1943

Aerial photo shows office building on Bourke Road, the subject two buildings with sawtooth roofs behind, and another along Doody Street

1945

Workplace survey showed Commonwealth Oxygen and Acetylene Pty Ltd used electrical equipment rated at 1118 hp to produce industrial gases and had 131 employees

30 July 1947

Name of company changed to CIG (New South Wales) Pty Ltd

9 May 1949

Application by Robertson and Marks for additions to the engine room worth £34,000

23 September 1949

Application for new buildings to manufacture acetylene gas

31 July 1950

Application by Robertson and Marks for new buildings worth £68,000

5 September 1950

Application by Robertson and Marks for 4 new store buildings worth £26,816

4 October 1950

Application to erect 4 new store buildings

8 June 1951

Application for second extension to engine room worth £60,000

4 June 1954

Application for extension to liquid oxygen room

23 August 1954

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Application for new medical gases building worth £34,000

24 September 1954

Application for additions to acetylene filling building

15 November 1954

Application for additions to acetylene generator house worth £12,000

9 May 1955

Application by Robertson and Marks for new bulk store worth £40,000

27 April 1956

Application for new office building worth £3000

15 June 1956

Application for additions to garage building

13 November 1956

Application for additions to oxygen factory worth £8,500

15 April 1957

Application by F T Eastment and Sons for new office block worth £222,420

23 April 1957

Application for extensions to garage and workshop worth £14,500

16 April 1959

Application for extensions to acetylene filling building worth £10,500

8 February 1960

Application for additions to medical gases building worth £5,000

24 June 1960

Application for additions to amenities building worth £9,500

11 July 1963

Application for extensions to factory worth £16,000

11 March 1964

Application for additions to technical centre worth £16,000

23 June 1966

Application by R Gibson for office extensions worth \$80,000

5 July 1966

Application by R Gibson for additions worth \$40,000

28 November 1966

Application for extensions to liquid oxygen plant worth \$320,000

29 August 1967

Application by R A Findlay for alterations to form a canteen worth \$55,000

6 September 1967

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

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Application by R Gibson for factory additions worth \$30,000

2 April 1968

Application by R A Findlay for alterations worth \$8,000

25 March 1969

Application for extensions to building worth \$10,000

27 May 1970

Application by Robin Gibson, architects, for extension to existing store worth \$192,000

10 April 1972

Application for extensions to stores worth \$32,500

11 January 1973

Application to erect a helium liquefaction building worth \$25,000

16 October 1973

Application for erect fluorocarbon facility worth \$12,500

28 August 1974

Application for alterations worth \$8000

18 April 1975

Ownership transfer to Commonwealth Industrial Gases Ltd

26 November 1975

Application for new retail shop worth \$40,000

19 May 1976

Application for alterations and additions worth \$80,000

11 April 1985

Ownership transferred to F Hannan (Properties) Pty Ltd

11 June 1985

Application to erect new printing factory

16 February 1987

Application by F Hannan Properties to erect warehouse to store paper reels

18 October 1990

Application by F Hannan Properties for additions to create staff training area and gymnasium worth \$350,000

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Recommended management: Retained and conserve the two subject buildings.

A Heritage Assessment and Heritage Impact Statement, or a Conservation Management Plan, should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Do not paint or render unpainted brickwork.

Brick finishes, parapet wall, relief brickwork, pattern of openings and downpipes, cantilevered hood and other original building features should be maintained and conserved.

Consider new uses for the buildings that will re-use and expose their industrial features to retain their former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the buildings to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): [Historical significance] Built in 1939-1943 for the major Australian compressed gas manufacturers, Commonwealth Industrial Gases, the two extant buildings on this site represent the large-scale industrial development of Alexandria during the mid-twentieth century. The former oxygen factory and demonstration block represent the two most intact substantial buildings surviving from the Commonwealth Industrial Gases use of this site from 1939 until the 1970s.

The buildings are historically significant for their connection to the Australian manufacturing of compressed gases used for medical, industrial, construction and commercial purposes throughout New South Wales from 1939 to the 1970s. The factory provides evidence of the twentieth-century development of science and technology in Australia, in particular the growing use of compressed gases for industry, medical care and construction, and associated innovations. Innovative techniques and products made at this factory included humidicribs for premature babies, new methods for joining and cutting metal and spray-painting. The acetylene produced at this factory was essential for welding and flame-cutting of metals. The factory also represents the source of products used in everyday Australian lives, such as the carbon dioxide for making soda.

The scale of the buildings, the period of their construction, and the commissioning of architects for their design indicate the importance of gases as a key material for industry and construction at this time. The extension of these buildings record the growing use of gasses during the twentieth century.

The former Commonwealth Industrial Gases buildings forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Criteria b): The site has significant associations with the Commonwealth Industrial Gases, and the compressed gases and associated welding, humidicribs and other equipment they manufactured for medical, industrial, construction and commercial use across New South Wales from 1939 until approximately 1975.

[Historical association significance]

The building designs are associated with the prominent architectural firm of Robertson & Marks.

Criteria c): The two main buildings surviving on this site from the Commonwealth Industrial Gases era, comprising the former oxygen factory and demonstration block, represent good examples of the mid-twentieth century industrial work of prominent architects, Robertson and Marks. They also demonstrate inter-war buildings purpose-designed to suit the gas manufacturing process and demonstration of technology using these gases.

[Aesthetic/Technical significance]

Architecturally, these buildings represent good examples of the mid-twentieth century industrial work of prominent architects, Robertson and Marks. Both buildings exhibit typical features of functionalist-style industrial buildings including geometric building forms that are robust, simple and solid, face brick walls and sawtooth roofs concealed behind a parapet wall. While generally unadorned as is typical for utilitarian buildings, the face-brick walls are relieved by geometric patterns of decorative brickwork for the parapet wall, string courses, and evenly spaced downpipes and rainwater funnels.

The later conversion of the factory and demonstration block and new buildings constructed on this site for Sydney Corporate Park have retained the overall integrity of these two buildings.

Criteria d): Social significance requires further study to ascertain its value to communities. As a significant employer in the local area from 1939 to the 1970s, the site and these buildings are likely to have social value to former workers of the Commonwealth Industrial Gases, CIG, and their families. Historic records suggest CIG had an active community of workers, scientists and their families with company sports teams, family and other social events sponsored by the company.

Criteria e): The buildings could yield information about the evolving design of twentieth century gas manufacturing plants, in particular for oxygen production. Surviving machinery or fixtures from this use could yield information about the science of gas manufacturing and its use in medicine, industry and construction from this period.

[Research significance]

The design of these two buildings could also yield further information on the work of the noted architectural firm, Robertson & Marks, and the evolution of their work within the first fifty years of practice.

Criteria f): The buildings are rare as the most extant substantial buildings from the former Commonwealth Industrial Gases factory.

[Rarity]

Criteria g): The former Commonwealth Industrial Gases buildings represent a good example a large industrial precinct from the mid-twentieth century, industrial buildings designed in the inter-war functionalist style, and industrial works of Robertson and Marks architects.

[Representative]

Intactness/Integrity: Largely intact externally

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	Hickson, Jack	Aerial photographs, Commonwealth Industrial Gases (CIG), AI	1964
	Alexandria (N.S.W.) Municipal Council	Alexandria, "The Birmingham of Australia" 75 years of progress	1943
	Ian Gregory Little	Robertson & Marks Architects 1892-1941	1975

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage Study		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	PART LOT	10		DP	1179388

Latitude:

Longitude:

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing: Name

Title

Number

ListingDate

City of Sydney Industrial and Ware Heritage study

Data entry: Data first entered: 05/08/2014

Data updated: 13/05/2015

Status: Completed

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Former oxygen factory

Copy right: City of Sydney

Image by: City Plan Heritage

Image date: 22/08/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3451335ee1d28b040f597a2c423a95be571.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3451335ee1d28b040f597a2c423a95be571.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Northern end of former oxygen factory

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34514798630081e4885ad40628458733b5c.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34514798630081e4885ad40628458733b5c.JPG

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Former demonstration block

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34567cfcdfda8140dcb2e284b6b08d23c4.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34567cfcdfda8140dcb2e284b6b08d23c4.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Commonwealth Industrial Gases oxygen factory and demonstration block circled in red

Copy right:

Image by: Google maps with City Plan Heritage mark-up

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345522373037745460ebbc1b453734a568a.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345522373037745460ebbc1b453734a568a.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1943 aerial of site showing buildings before southern additions with street names overlaid

Copy right: City of Sydney

Image by: RTA

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455e987cfc5361426ca96cbb9e69697698.png>

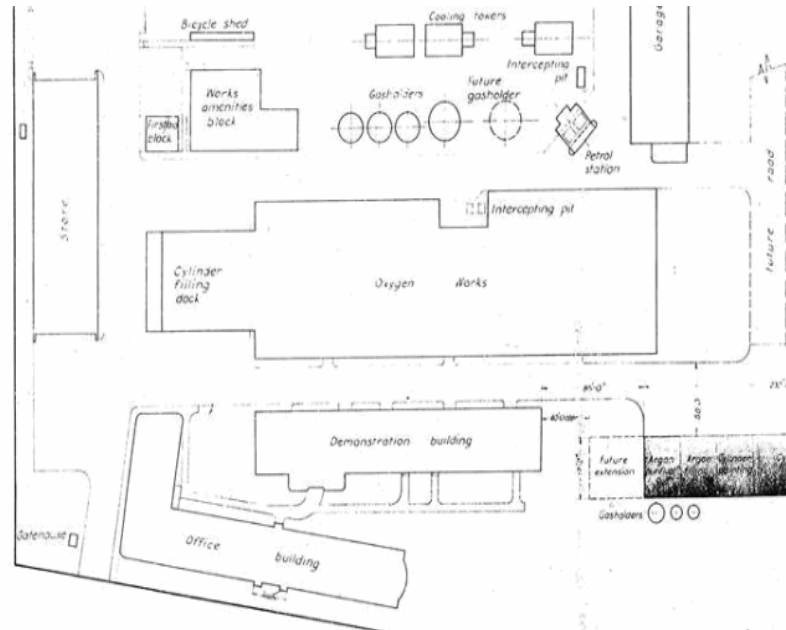
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3455e987cfc5361426ca96cbb9e69697698.png

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Extract of 1954 site plan showing the footprint and function of the subject buildings

Copy right:

Image by: Robertson & Marks (attributed)

Image date: 03/08/1954

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/345969d19bc6fa04c17941136077346aafd.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test345969d19bc6fa04c17941136077346aafd.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing subject buildings and other buildings on part of the CIG site at this time

Copy right: City of Sydney

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a4abc62c19864e56906a05c245aac36c.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a4abc62c19864e56906a05c245aac36c.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1964 aerial photograph of the site from the west

Copy right: City of Sydney

Image by: Hickson, Jack

Image date: 01/01/1964

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345720bbd1847a94c90baa6a75c6ac257b4.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345720bbd1847a94c90baa6a75c6ac257b4.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1962 image of CIG hydrogen cylinders showing south end of subject buildings

Copy right: State Library of NSW

Image by: Jack Hickson, Australian Photographic Agency - 13434

Image date: 18/10/1962

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a482ce1dfafb4d13b4f8b04b369dc259.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a482ce1dfafb4d13b4f8b04b369dc259.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1962 image of CIG hydrogen cylinders on the site

Copy right: State Library of NSW

Image by: Jack Hickson, Australian Photographic Agency - 13435

Image date: 18/10/1962

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34549ce083b0d0943d89610703e49161793.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34549ce083b0d0943d89610703e49161793.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Liquid nitrogen tanker at the CIG factory in 1962

Copy right: State Library of NSW

Image by: Australian Photographic Agency - 13556

Image date: 18/10/1962

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345f451059a14d94648973a40a3ae89ee78.jpg>

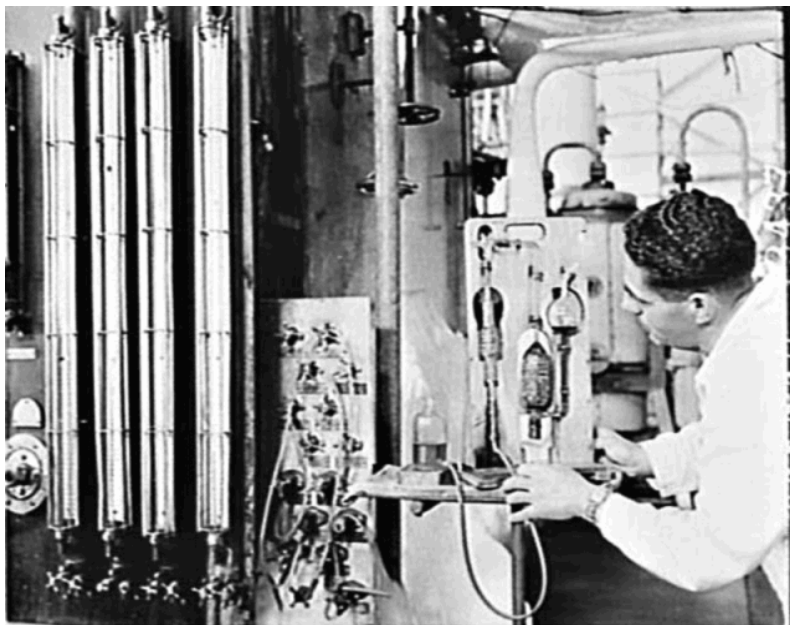
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345f451059a14d94648973a40a3ae89ee78.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Oxygen testing at CIG site in 1962

Copy right: State Library of NSW

Image by: Jack Hickson, Australian Photographic Agency - 13437

Image date: 18/10/1962

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345c828ab47293a41549cedc821833243f2.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345c828ab47293a41549cedc821833243f2.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: Vertical welding machine at CIG site in 1963

Copy right: State Library of NSW

Image by: Jack Hickson, Australian Photographic Agency - 13664

Image date: 16/01/1963

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34567bc6b0bfb27446da049a26994695331.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/P/Thumb_test34567bc6b0bfb27446da049a26994695331.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: CIG tour and demonstration in 1964 for Australian Association of National Advertisers

Copy right: State Library of NSW

Image by: Jack Hickson, Australian Photographic Agency - 16270

Image date: 29/04/1964

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3459d9bbe17434b4e0781936860bd19d6e7.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3459d9bbe17434b4e0781936860bd19d6e7.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: New premature baby ward at Crown Street Women's Hospital using CIG humidicribs & other CIG equipment

Copy right:

Image by: Jack Hickson, Australian Photographic Agency - 13409

Image date: 17/10/1962

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345ba5878d1d8da42dfa5ba6199dd15d6dd.jpg>

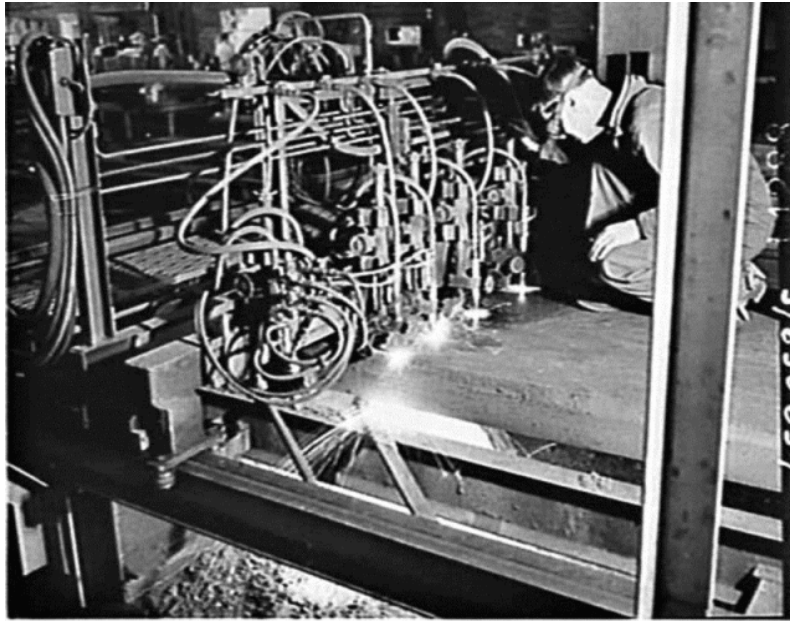
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345ba5878d1d8da42dfa5ba6199dd15d6dd.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: CIG oxyacetylene cutting plant in use in 1963 at Luke Muras, 55 O'Riordan Street

Copy right: State Library of NSW

Image by: Australian Photographic Agency - 14288

Image date: 19/06/1963

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3451630c54183ae4ad5a09372af393bb49d.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3451630c54183ae4ad5a09372af393bb49d.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



Caption: 1962 Christmas party for employees children

Copy right: State Library of NSW

Image by: Jack Hickson, Australian Photographic Agency - 13608

Image date: 14/12/1962

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3459c1e3563a13e421387aeda41ef9464c2.jpg>

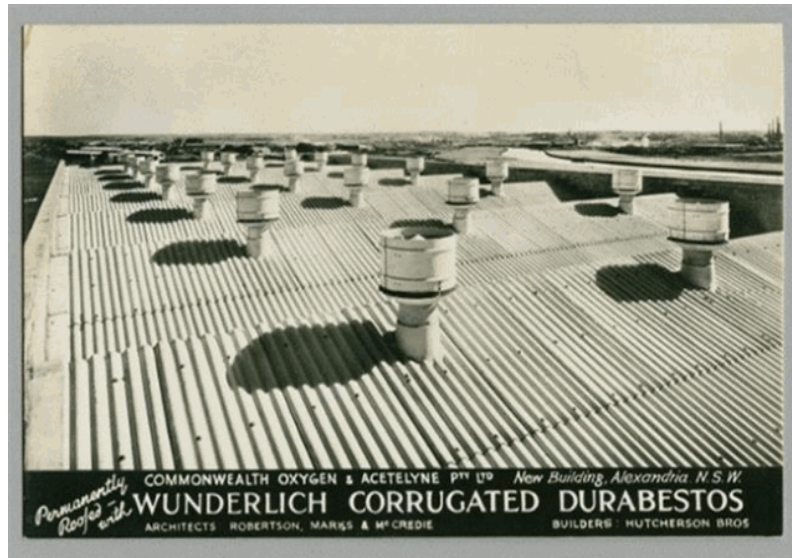
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3459c1e3563a13e421387aeda41ef9464c2.jpg

Item name: Former Commonwealth Industrial Gases oxygen factory and demonstration block including interiors

Location: 138-196 (160) Bourke Road Alexandria 2015

Sydney

Image:



A7437-28/129
24.3.2009

Caption: Postcard showing roof of Commonwealth Oxygen & Acetylene Pty Ltd's building in Alexandria, c1939

Copy right: Powerhouse Museum

Image by: Unknown

Image date: 01/01/1939

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345445bb364756940b4b85e5c4d6cbf208a.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345445bb364756940b4b85e5c4d6cbf208a.jpg

Inventory 13

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

Address: 16 Euston Road

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

State: NSW

Parish: Alexandria

County: Cumberland

Other/former names:

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Utilities - Electricity

Category: Electricity Transformer/Substation

Owner: State Government

Admin codes:

Code 2:

Code 3:

Current use: Electricity substation

Former uses: Electricity substation

Assessed significance: Local

Endorsed significance:

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

Statement of significance: Built in 1934 to supply electricity for the Australian Window Glass Co factory, Electricity Substation No. 117 represents a surviving example of the original network of more than 360 substations built by Sydney Municipal Council from 1904 to 1936, which first supplied electricity to Sydney's industries and houses. The period and location of the substation records the expansion of Sydney's electricity network and the growth of electricity use in Alexandria. The building also marks the major changes electricity brought for Alexandria's growth, development and population. As the most intact surviving building from the surrounding site's former industrial use, the substation is also a rare remnant of the substantial Alexandria factory for Australian Window Glass Co.

Aesthetically, the building demonstrates the characteristic modest form, quality of design and construction for Sydney's substations, which were designed to a higher standard than required for their function in order to integrate into their established urban contexts by reflecting neighbouring architecture or popular styles of the time.

Electricity Substation No.117 is a representative example of a simply detailed, purpose-designed and built substation from the inter-war period. It demonstrates typical characteristics of the stripped classical style applied to a utilitarian building, including the heavy geometric massing, symmetry of the main building, roof form concealed behind a parapet wall, emphatic portal, simple surfaces and reference to classical columns in the stepped and fluted entrance recess. As is common for this style, Art Deco elements are also found in the decorative features including the geometric brick relief ornamentation along the parapet wall and stepped lintel over the entrance. The building contributes to the streetscape and is a significant example of civic architecture in the area.

Electricity Substation No.117 forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Electricity Substation No.117 and the other surviving substations demonstrate the fundamental role that electricity played in powering Australia's industrialisation and how technological innovations of the time, specifically electricity, defined Sydney's industrial development during the twentieth century. Often constructed to service the high energy demands of factories in the near vicinity, the number, concentration and location of substations provide markers of twentieth century industrial centres and factories in the way that chimney stacks mark the location of factories predating electricity.

The larger number of substations in Alexandria demonstrates its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity. Alexandria's Euston Road was almost exclusively occupied by industries, including the substantial former factory for Australian Window Glass located on land surrounding and opposite the substation.

Electricity Substation No. 117 is of local heritage significance in terms of its historical, aesthetic and representative values.

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

Historical notes of provenance: Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street. The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians were working in city industries than in farms or mines.

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Substations history:

One of the major innovations in industry during the nineteenth century was the development of electricity as a power and lighting source, which rivalled and then replaced water and steam power. The mills and workshops of the earlier Industrial Revolution in Britain and North America were mainly water and steam powered, whereas Australia's twentieth century industrial buildings were powered by electricity.

As part of supplying electricity to Sydney's houses and industries for the first time, Sydney Council built Sydney's first power stations and substations during the first half of the twentieth century. Sydney Council, then known as Sydney Municipal Council or the Municipal Council of Sydney, was charged with supplying electricity to Sydney city and surrounding areas in 1896 through the law named the Municipal Council of Sydney Electric Lighting Bill passed on 16th October 1896. Electricity supply was managed through the council's department known by a number of names: the Electric Lighting Committee, the Electric Light Department and the Electricity Department from 1920 to 1935. From 1936 the electricity undertaking was named Sydney County Council when it was reformed as a separate authority as a result of the Gas & Electricity Act of 1935. The various names for the council and subsequent electrical authority are recorded in the initials and building names inscribed in substation facades.

Sydney's first power station at Pyrmont began operating in 1904. The large network of substations were constructed in strategic locations to supply power from these power stations to individual customers and other electricity networks. Their specific purpose was to house machinery to convert high voltage electricity for industrial or domestic use. Substations were often erected in close proximity to factories to service their high energy demands. Consequently the number, concentration and location of substations provide markers of twentieth-century factories and industrial centres in the way that chimney stacks marked factories pre-dating electricity. Alexandria demonstrates this pattern with its large number of substations, reflecting its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity.

The period and location of surviving substations record the progressive extension of Sydney's electrical network from the centre of Sydney to surrounding areas, the scale and importance of this network, and the fundamental changes electricity brought for Sydney's growth, development and society. Sydney Municipal Council built its first substations at Town Hall, Taylor Square, Woolloomooloo and Ultimo, followed by Glebe, Newtown, Camperdown and surrounding areas. From 1904 to 1935, Sydney Council built more than 360 substations and almost 400 pole transformers throughout Sydney and surrounding suburbs. More continued to be built in the following decades. The Energy Australia (AusGrid) heritage and conservation register records that 33 of the surviving substations are located within the City of Sydney. This number excludes those no longer owned or operated by the electricity supplier.

Alexandria demonstrates this pattern with its larger number of substations reflecting its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity. Alexandria's Euston Road was almost exclusively occupied by industries, including the substantial former Australian Window Glass factory located on the land surrounding Substation No. 117 for which the substation was first built.

Each substation has its own number inscribed on the building facade, which reflects its role in the broader electrical network and generally the total number, sequence and period of construction, with some exceptions where disused numbers were reallocated. Most substations were constructed in established urban areas on a small portion of land acquired or subdivided specifically for this purpose. These buildings, while modest in scale and

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

different in function to surrounding buildings, were designed and constructed to a good standard, in a style designed to harmonise with surrounding architecture, in order to reduce community fears or resistance to the incursion of this new technology and impacts on the appearance of streets.

The rise of electricity during the late nineteenth century, and in particular small motors for driving machinery and electrical lights, changed the configuration of industrial buildings and machinery. Electricity meant that factories could be designed with a more flexible layout because small electric motors eliminated the need for belt and shaft drives from the steam plant. Factory building design became less reliant on windows for natural light and gas lighting ventilation because of the advent of electric lighting. Electricity also created a new market for factories to produce the new consumer goods reliant on electric power, such as fridges, washing machines, telephones, stoves, ice cream, and the engineering for electric lights, trains and trams.

Site history:

The substation was constructed in 1934 to supply electricity to the Australian Window Glass Co factory to service its increasing demand for electricity.

This was the second permanent substation built in the immediate vicinity after the 1929 substation located on land leased from Australian Window Glass Co. The company was initially unwilling to lease any additional land to accommodate a new substation due to its planned extensions on the site, however eventually agreed to sell the subject site to Sydney Municipal Council.

A new temporary outdoor substation was initially erected on this site in 1931 until the existing substation was completed by June 1934.

Later in 1934, the new substation began operations and the temporary substation was dismantled.

In the early 1940s, the Australian Window Glass Co began using high voltage electricity. The main low-voltage supply to the glassworks from the Euston Road substation was disconnected, although a small capacity supply to the works was maintained for use in emergencies. The substation continued to supply electricity to other consumers in the surrounding area.

The majority of the former glassworks have been demolished with only part of the 1930 façade remaining along Euston Road located adjacent to the substation.

By 2012, the substation was still in service for supplying low-voltage electricity (Pennington, 2012, pp. 54-55).

Themes: National theme

3. Economy

4. Settlement

State theme

Technology

Utilities

Local theme

Electricity

Electricity Substation

Designer: Sydney Municipal Council

Builder: Sydney Municipal Council

Year started: 1931

Year completed: 1934

Circa: No

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

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Physical description: Substation No. 117 was built by Sydney Municipal Council in 1934. The substation comprises a single-storey brick building contained under a gabled roof concealed behind a parapet wall. The facade is constructed of tuck-pointed face brickwork. The facade wall is continued at a lower height along the street frontage to form the fence and entrance to the side transformer yard.

This simply detailed, purpose-designed and built substation from the inter-war period exhibits typical characteristics of the stripped classical style including the heavy geometric massing, symmetry of the main building, roof form concealed behind a parapet wall, emphatic portal, simple surfaces and reference to classical columns in the stepped and fluted entrance recess.

Art Deco decorative elements common to this style are found in the geometric, diamond-pattern, relief brick ornamentation along the parapet wall and stepped lintel over the entrance.

A large identity plaque surmounts the main entrance. The entrance and skyline are emphasised by painting of the lintel over the entrance, the recessed entrance architrave and parapet capping.

Internally, the roof, foundations and floor structures have not been inspected by the authors.

Category: Individual building. Style: Inter-war stripped classical. Storeys: One. Façade: Face brick. Side/Rear Walls: Painted brick.

Physical condition level: Good

Physical condition:

Archaeological potential level: Not assessed

Archaeological potential Detail:

Modification dates:

Recommended management: Retain and conserve the building.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

No vertical additions should be made to the building.

Do not paint or seal face brickwork.

Tuck-pointed face brickwork, entrance and parapet detailing and other original building features should be maintained and conserved.

New uses for the building are to complement and enhance the internal and external character of the building by conserving and interpreting significant fabric and spatial qualities. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Item name: Electricity Substation No. 117 including interiors

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Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): Built in 1934 to supply electricity for the Australian Window Glass Co factory, Electricity Substation No. 117 represents a surviving example of the original network of more than 360 substations built by Sydney Municipal Council from 1904 to 1936, which first supplied electricity to Sydney's industries and houses. The period and location of the substation records the expansion of Sydney's electricity network and the growth of electricity use in Alexandria. The building also marks the major changes electricity brought for Alexandria's growth, development and population. As the most intact surviving building from the surrounding site's former industrial use, the substation is also a rare remnant of the substantial Alexandria factory for Australian Window Glass Co.

[Historical significance]

Electricity Substation No. 117 forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Electricity Substation No. 117 and the other surviving substations demonstrate the fundamental role that electricity played in powering Australia's industrialisation and how technological innovations of the time, specifically electricity, defined Sydney's industrial development during the twentieth century. Often constructed to service the high energy demands of factories in the near vicinity, the number, concentration and location of substations provide markers of twentieth century industrial centres and factories in the way that chimney stacks mark the location of factories predating electricity.

The larger number of substations in Alexandria demonstrates its history as a major industrial area mostly developed after the advent of electricity and before substations of this kind were no longer needed for supplying electricity. Alexandria's Euston Road was almost exclusively occupied by industries, including the substantial former factory for Australian Window Glass located on land surrounding and opposite the substation.

Criteria b): The substation has significant associations with the Municipal Council of Sydney, who constructed the building as part of its early twentieth-century responsibility for the generation and distribution of electricity throughout the greater Sydney area from 1904 until 1936. It also has associations with the factory for which it was built, the Australian Window Glass Co, formerly located on the adjacent site, since largely demolished.

[Historical association significance]

Criteria c): Substation No. 117 demonstrates the characteristic modest form, quality of design and construction for Sydney's substations, which were designed to a higher standard than required for their function in order to integrate into their established urban contexts by reflecting neighbouring architecture or popular styles of the time.

[Aesthetic/Technical significance]

The buildings is a representative example of a simply detailed, purpose-designed and built substation from the inter-war period. It demonstrates typical characteristics of the stripped classical style applied to a utilitarian building, including the heavy geometric massing, symmetry of the main building, roof form concealed behind a parapet wall, emphatic portal, simple surfaces and reference to classical columns in the stepped and fluted entrance recess. As is common for this style, Art Deco elements are also found in the decorative features including the geometric brick relief ornamentation along the parapet wall and stepped lintel over the entrance.

The building contributes to the streetscape and is a significant example of civic architecture in the area.

Criteria d): Social significance requires further study to ascertain its value to communities. The building may have value to community members with an interest in the history, buildings and technology for Sydney's electrification.

[Social/Cultural significance]

Item name: Electricity Substation No. 117 including interiors

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Criteria e): The building may offer research potential into the evolution of technology for electricity supply and architectural design for substations in Sydney.
[Research significance]

Criteria f): As the most intact surviving building from the surrounding site's former industrial use, the substation is also a rare remnant of the substantial Alexandria factory for Australian Window Glass Co.
[Rarity]

Criteria g): The building represents a good example of a substation from the inter-war period utilising the stripped classical style. It demonstrates the characteristic modest form, quality of design and construction for Sydney's substations.
[Representative]

The substation forms part of a collection of extant substations, which together represent the growth of Sydney's electrical network and the major change that electricity brought for Sydney's growth, development and population during the twentieth century, in particular for the development of industry.

Of more than 360 originally built by Sydney Municipal Council from 1904 to 1930 in metropolitan Sydney, the current Energy Australia (AusGrid) heritage and conservation register records that 33 surviving substations are located in the City of Sydney. This number excludes those no longer owned or operated by the electricity supplier.

Intactness/Integrity: Intact externally.

References:	Author	Title	Year
	James Pennington	Electricity Substations of the Sydney Municipal Council, p.54-	2012
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria, Sydney	1890
	Higinbotham & Robinson	Waterloo, Sydney	1890
	Schwager Brooks and Partners Pty Ltd	Energy Australia (Ausgrid) section 170 heritage and conservati	2007
	TZG Architects and Orwell & Peter Pl	Conservation Management Plan: Substation No. 6 and Undergr	2002

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	1		DP	184514

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Ware	Heritage Act - s.170 NSW State agency heritage r	3430491	01/11/1994
		Heritage study		

Data entry: Data first entered: 05/08/2014 Data updated: 13/05/2015 Status: Completed

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

Image:



Caption: North-western (front) and north-eastern elevations of the substation

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345acbdd749fef94dce97fc52746c9d5711.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345acbdd749fef94dce97fc52746c9d5711.JPG

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

Sydney

Image:



Caption: The substation and adjacent altered building in 2014

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 05/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34510916a7d85bd49d49f1216eef1d33420.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34510916a7d85bd49d49f1216eef1d33420.JPG

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

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Image:



Caption: The substation in July 2008 before the surrounding factory buildings were altered or demolished

Copy right: James Pennington

Image by: James Pennington

Image date: 01/07/2008

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345ea11dd41bd9947e7a8e93caee9bfcd1b.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345ea11dd41bd9947e7a8e93caee9bfcd1b.jpg

Item name: Electricity Substation No. 117 including interiors

Location: 16 Euston Road Alexandria 2015

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Image:



Caption: 1956 detail sheet showing subject substation and surrounding industries

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3452eb975217bc4429d912d255c0b161ac1.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3452eb975217bc4429d912d255c0b161ac1.jpg

Inventory 14

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Address: 40A-42 Maddox Street

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish:

State: NSW

County:

Address: 58-68 Euston Road

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

Parish:

State: NSW

County:

Other/former names: Opera Australia Store, Colonial Combing Spinning and Weaving Company Ltd

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: Excluding the office building fronting Euston Road, as described in Sydney Local Environmental Plan

Item type: Built

Group: Manufacturing and Processing **Category:** Factory/ Plant

Owner:

Admin codes:

Code 2:

Code 3:

Current use: Commercial, warehouse

Former uses: Factory, warehouse

Assessed significance: Local

Endorsed significance:

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

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Statement of significance: Built for the Alexandria Spinning Mills from 1924, this complex represents one of Australia's largest wool and cotton mills from the first half of the twentieth century. The complex demonstrates the twentieth-century industrial development of Alexandria and provides evidence of the formerly widespread textiles industry in the City of Sydney.

The mills are historically significant for their connection to the Australian production of textiles from the time when Australian-made textiles first began to compete with foreign imports. The scale of the site and its buildings demonstrate the importance of the wool and cotton industry to Sydney and Australia. The construction of these mills provide evidence of the rapid growth of the Australian textile manufacturing industry during the 1920s as the range of production extended to finer qualities of yarn and cloth. Its subsequent expansion demonstrates the growth of the textiles industry to support the war effort for World War II.

The complex has significant associations with the Alexandria Spinning Mills from the 1920s to the 1960s and the knitting wool, knitting books, Australian military clothing used in World War II, and other products made at this site during this period.

As a major employer, in particular for girls and women, infamous for its poor working conditions, the former mills are also significant for their connection to the history of employment of women and the development of the labour movement in Sydney. These mills represent the site of major strikes during the 1930s and 1940s, which were a significant event in Sydney's twentieth century movement for improved rights and conditions for the working class, better conditions for women in the workforce and the growth of unions. For this reason, the site is likely to have social significance to the community of former workers and their descendants.

Dating from 1924 to the 1960s, the collection of buildings within this site represent a good example of a large industrial precinct from the early twentieth century. The buildings on the site demonstrate the distinctive modular building form of inter-war and post-war industrial buildings, characterised by repeated bays of sawtooth roofs containing southern roof lights, load-bearing brick walls and internally exposed timber or steel-framed construction.

The former mills complex forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former Alexandria Spinning Mills is of local heritage significance in terms of its historical, aesthetic, social and representative values.

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former Alexandria Spinning Mills including interiors

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Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Robertson & Marks history:

The prominent Sydney architects, Robertson & Marks, was established in 1892 and continues to practice today as Robertson & Marks Pty Ltd. The original partners were George Birrell Robertson and Theodore John Marks. Struan Robertson inherited both partners' shares upon their deaths in 1913 and 1941. John Trevor Guy joined the practice in 1940.

Much of the practice's early work was connected with racing due to the connections of the partner, Theodore Marks. Marks was a member of the Australian Jockey Club (AJC) from 1893, an original shareholder in the Victoria Park Racing and Recreation Grounds Co Ltd for pony-racing, and chairman of the Rosehill Racing Club between 1919-41. Marks designed many of the buildings and alterations at Randwick and Warwick Farm Racecourses for the AJC in 1922 and the since demolished Leger Stand at Rosehill (1920), amongst others.

Robertson & Marks designed a large number of significant buildings in Sydney. Between 1892 and 1941 these works included the: Edwards Dunlop & Dunlop Warehouses, Kent Street (1901); Briscoe & Co Ltd bulk store, Ultimo (1901); W. Horace Friend Warehouse, Clarence Street (1906); Oswald Sealy Building, Clarence Street (1906); Richardson & Co Emporium, Armidale (1908); the original Challis House, Martin Place (1908); Perpetual Trustee Co, Hunter Street (1917); Daily Telegraph Building, King Street, with Samuel Lipson (1912-16, 1934); Prouds Ltd, Pitt Street (1920); Hotel Australia Rowe Street wing (1923); Warwick Farm Racecourse grandstand (1925), Bank of NSW head office, Martin Place (1927-32); Mercantile Mutual Building, Pitt Street (1929); Asbestos House, York Street, with John Reid & Sons (1930-5); and the AWA Building, York Street, as Robertson, Marks & McCredie with Morrow & Gordo (1937-39).

In its earlier days, the practice also designed numerous houses for the elite of Sydney society, including: 'Goondee', Wahroonga (1897); 'Glensley', Turramurra (1897); 'Gorawin', Killara (1903); Brunton house, Bellevue Hill (1904); 'Heverlee', Wahroonga (1904); and 'Wanstead' (Gowing), Lindfield (1911).

The architectural styles of the firm changed both with time and the building type. Their major commercial buildings in the early years of the century were bold Federation warehouses with Romanesque arches at either ground or top floor level. The arches gave way to a simple rectilinear, trabeated facade treatment in later warehouses and offices. During the inter-war period, the firm's large Sydney buildings demonstrated a number of inter-war styles including the commercial palazzo style (Farmer & Co. department store, Market Street, 1920, and Gowings Bros Building, Market Street, 1912-29, with C.H. Mackellar), inter-war functionalist (S.H. Hoffnung & Co. Building, 1939, with Samuel Lipson) and restrained inter-war Mediterranean styles (Bondi Surf Pavilion, Bondi Beach, 1930 with L. McCredie). (Robertson, 2011)

Historical summary of site:

The Alexandria Spinning Mills Ltd was one of the nation's largest spinners and weavers of cotton and woollen goods in the first half of the twentieth century. The Alexandria Spinning Mills employed a large workforce. Relationships between management and the workers were often poor due to infamous working conditions. The factory in Alexandria was the scene of major strikes in the 1930s and 1940s.

The construction of these mills reflect the rapid growth of the Australian textile manufacturing industry in the 1920s as the range of production extended to finer qualities of yarn and cloth. Cotton spinning began in Sydney in 1923. Australian manufacturers focussed on displacing the imported cloth and producing woollen yarn for

Item name: Former Alexandria Spinning Mills including interiors

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knitting mills. In the twenties, the main products of cotton weaving were towels and cotton tweeds. By the end of the twenties, textile imports had been reduced to a minor portion of the market. Import tariffs had played a role in the success of local manufacturers. Australia's cotton manufacturing was a new emerging industry throughout the twenties (http://www.kooriweb.org/cland/textile.html#_ftn20, accessed 15 January 2015).

After the firm purchased land from the Cooper Estate, a Certificate of Title was issued on 4 February 1924 to the Colonial Combing Spinning and Weaving Company Ltd for 7½ acres with frontages to Euston Road, Maddox Street and Huntley Street (Certificate of Title 3555 f 219).

A valuation in November 1924 showed that a brick factory with a galvanised iron roof and engine room had been constructed by that time (Valuer-General, Valuation Cards, Alexandria, SRNSW 13/7448, Euston Rd).

In December 1924, the company was advertising for girls to work in its spinning factory (SMH, 22 Dec 1924, p 16).

In October 1926, fire damaged the interior of the Colonial Combing Spinning and Weaving Company's other works in Lord Street, Botany, causing damage estimated at £15,000 (SMH, 21 Oct 1926, p 11).

The new company named Alexandria Spinning Mills Ltd was registered on 9 November 1926 (ASIC database search, 5 Sept 2014). On 4 March 1927, the property in Euston Road and 40A-42 Maddox Street was formally transferred to the Alexandria Spinning Mills Ltd (CT 3555 f 219).

The valuation of 8 December 1931 recorded that the woollen mill then had offices, a dye room, boiler house, spinning and twisting rooms, a warehouse of brick with an iron roof, partly on 2 floors and partly in a basement plus a brick weaving mill with an iron roof. By 15 May 1934, the factory had been enlarged with a brick extension with a corrugated fibro roof (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8590, no 292).

In January 1934, the workers went on strike. The problems did not end there. Numerous disputes between management and its employees followed during 1940-1. Those disputes were not confined to the Alexandria Spinning Mills, but were part of a more general industry-wide strike during the second world war. The workers of the Alexandria Spinning Mills lead the fray for strikes in the textiles industry.

In 1940 and 1941, more than 1900 of the mostly female workforce went on strike. Strikers from here and other mills including the Bradford Cotton Mills in Newtown demanded pay increases against the recommendations of the union officials who argued for a no strike policy for the 'war effort'.

As a major spinner and weaver, Alexandria Spinning Mills was busy during the war years. They made khaki cloth, socks and underwear for the Australian military forces (The West Australian, 26 September 1940, p 8). Between February 1939 and 9 June 1942, the factory was enlarged. Further additions had been made by the time the next valuation occurred on 15 February 1945 (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8590, no 292).

The mill made Twinprufe hand knitting wools, Sunbeam and Sun-glo knitting books, amongst other products.

The 1945 workplace survey listed Alexandria Spinning Mills Pty Ltd, Euston Road, as conducting the business of textile spinning and weaving. It was recorded in this survey as using machinery rated at 1,504 horsepower and employing 644 employees at that time (Workplace Survey, Alexandria, SRNSW 7/6847).

The Alexandria Spinning Mills continued as the proprietor of the land until the mid-1960s (CT 8011 f 199). Additions and improvements continued to be made to the factory until that time. Between 1963 and 1966, the prominent architectural firm of Robertson and Marks designed various alterations and additions (58-68 Euston Rd, Street Cards, NSCA).

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Themes: National theme

3. Economy

3. Economy

5. Working

State theme

Commerce

Industry

Labour

Local theme

Warehouses

Activities associated with the n

Activities associated with work

Designer: Robertson & Marks (1963-1966 alterations and additions)

Builder: Unknown

Year started: 1924

Year completed: 1966

Circa: Yes

Physical description: The Former Alexandria Spinning Mills precinct contains a number of former industrial buildings dating from 1924 to the 1960s, located adjacent to the stormwater channel and behind other buildings addressing Euston Road and Maddox Street.

The collection of buildings within this site demonstrate the distinctive modular building form of inter-war and post-war industrial buildings, characterised by repeated bays of sawtooth roofs containing southern roof lanterns to light the interiors, load-bearing brick walls and internally exposed timber or steel-framed construction. Eight bays of connected sawtooth roofs extend across the length of the two joined sites, running parallel to Maddox Street from the north-west Euston Road boundary to the south-east boundary with the stormwater channel.

The buildings accessed from Euston Road include an unusual sawtooth-roofed factory and warehouses in several interconnected sections. Former industrial buildings located to the rear of these buildings, accessed from Maddox Street, are of post and beam construction with timber roof trusses and slant purlins sitting on the beams. The roof forms are an unusual combination of sawtooth and gabled roof construction with the mostly gabled roof lifted on the south-west face to form roof lanterns, similar to a sawtooth roof.

Buildings on this site shown in historic records as constructed by the 1920s include a brick factory and engine rooms. By the 1930s, site offices, a dye room, boiler house, spinning and twisting rooms, a two-storey brick warehouse, a brick weaving mill, and an extension to the brick factory had been added. Alterations and additions constructed from 1963-1966 were designed by Robertson and Marks.

The buildings have been adaptively re-used. Part of the southern-most bay of the Euston Road section of the site has been demolished. The office building fronting Euston Road is a late twentieth-century construction, which has been excluded from the listing boundary.

Category: Precinct. Style: Inter-war and post-war. Walls: Brick. Roofs: Sawtooth and gabled.

Physical condition level: Fair

Physical condition:

Archaeological Not assessed

potential level:

Archaeological potential Detail:

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

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Modification dates: Timeline of known dates for changes to the site:

4 February 1924

Certificate of title issued to the Colonial Combing Spinning and Weaving Company Ltd for 7½ acres with frontage to Euston Road, Maddox Street and Huntley Street

November 1924

Valuation card shows brick factory with galvanised iron roof, engine room etc owned by Colonial Combing Spinning and Weaving Company Ltd

4 March 1927

Ownership transfer to the Alexandria Spinning Mills Ltd

8 December 1931

Factory has offices, dye room, boiler house, spinning and twisting rooms, warehouse of brick with iron roof, partly on 2 floors and partly in basement plus brick weaving mill with iron roof

15 May 1934

Factory enlarged with brick extension with corrugated fibro roof

February 1939 - June 1942

Additions to factory

15 February 1945

Additions to factory

25 March 1957

Application by Alexandria Spinning Mills for alterations to entrance worth £800

29 May 1962

Application for alterations worth £8,000 by E A & J M Scott

27 June 1962

Application for alterations to part of factory for dyeing and finishing textiles by Gibbs Runge (NSW) Pty Ltd

24 April 1963

Application for use for stationery manufacture and printing by W Neville & Co Ltd

6 May 1963

Application by Robertson and Marks for new doorway to No 68 worth £400

22 October 1963

Application by Robertson and Marks for alterations to toilet block worth £8,000

21 November 1963

Application by Robertson and Marks for alterations worth £20,000

28 November 1963

Application by Robertson and Marks for alterations worth £4,000

3 February 1964

Application by Robertson and Marks for roller shutter doors worth £5,000

14 February 1964

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Application by Robertson and Marks for amenities worth £1,000

16 April 1964

Application by Robertson and Marks for alterations worth £1,500

20 March 1964

Application by Robertson and Marks for office building at No 66 worth £40,000

15 July 1964

Application by Robertson and Marks for alterations and additions worth £7,000

11 December 1964

Application by Robertson and Marks for gatehouse worth £300

11 December 1964

Application by Robertson and Marks for entrance gates worth £800

13 April 1965

Application by Robertson and Marks for alterations and additions to Number 66 worth £2,000

29 December 1966

Application by Nationwide Food Services (Catering) Pty Ltd to use Number 66 as a smallgoods shop, refreshment room and for selling ice cream

29 April 1966

Application by Robertson and Marks for alterations and additions worth \$1,200

30 August 1966

Application by Robertson and Marks for alterations and additions to kitchen worth \$8,000

4 October 1966

Application by Robertson and Marks for alterations and additions to No 68 worth \$1,000

17 January 1990

Application by Gagt Architects to replace existing roof and roof frames

20 September 1990

Application by Gagt Architects for alteration and additions worth \$600,000

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Recommended management: The inter-war and post war buildings should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the buildings prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival and photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Maintain the modular bay form of sawtooth and gabled roofs. Ensure surviving internal timber structural elements are maintained and conserved.

Consider new uses for the buildings that will re-use and expose their industrial features to retain their former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the buildings to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): Built for the Alexandria Spinning Mills from 1924, this complex represents one of Australia's largest wool and cotton mills from the first half of the twentieth century. The complex demonstrates the twentieth-century industrial development of Alexandria and provides evidence of the formerly widespread textiles industry in the City of Sydney.

[Historical significance]

The mills are historically significant for their connection to the Australian production of textiles from the time when Australian-made textiles first began to compete with foreign imports. The scale of the site and its buildings demonstrate the importance of the wool and cotton industry to Sydney and Australia. The construction of these mills provide evidence of the rapid growth of the Australian textile manufacturing industry during the 1920s as the range of production extended to finer qualities of yarn and cloth. Its subsequent expansion demonstrates the growth of the textiles industry to support the war effort for World War II.

As a major employer, in particular for girls and women, infamous for its poor working conditions, the former mills are also significant for their connection to the history of employment of women and the development of the labour movement in Sydney. These mills represent the site of major strikes during the 1930s and 1940s, which were a significant event in Sydney's twentieth century movement for improved rights and conditions for the working class, better conditions for women in the workforce and the growth of unions.

The former mills complex forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Criteria b): The complex has significant associations with the Alexandria Spinning Mills from the 1920s to the 1960s and the knitting wool, knitting books, clothing for the Australian military during World War II, and other products made at this site during this period.
[Historical association significance]

Criteria c): Dating from 1924 to the 1960s, the collection of buildings within this site represent a good example of a large industrial precinct from the early twentieth century. The buildings on the site demonstrate the distinctive modular building form of inter-war and post-war industrial buildings, characterised by repeated bays of sawtooth roofs containing southern roof lights, load-bearing brick walls and internally exposed timber or steel-framed construction.
[Aesthetic/Technical significance]

Criteria d): Social significance requires further study to ascertain its value to communities. As a major former employer, infamous for its poor working conditions, and site of major strikes of its mostly female workforce in the 1930s and 1940s, the site is likely to have social significance to the community of former workers of the Alexandria Spinning Mills, and their descendants. It may also have significance to the Australian community as the source of the Sug-glo knitting books, Twin-Prufe knitting wool and some clothing that supplied the Australian military during World War II.
[Social/Cultural significance]

Criteria e):
[Research significance]

Criteria f):
[Rarity]

Criteria g): The former Alexandria Spinning Mills complex is a good example of a large-scale industrial precinct from the first half of the twentieth century.
[Representative]

Intactness/Integrity: Relatively intact externally

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	The Koori History Website Project	Textile manufacture, http://www.kooriweb.org/cland/textile.htm	
	Forster, Colin	Industrial Development in Australia 1920-1930	1964
	Sydney Morning Herald	Deadlock in textile workers' strike	1940
	Sydney Morning Herald	Textile workers outside mill	1941
	The Mercury, Hobart	Returning to Work; Spinning Mill Strikers	1940
	Scott Cumming	Chimneys and Change: Post European Environmental Impact in	2004

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial & Warehouse Buildings Heritage Study		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	1 & 2		DP	828392

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Ware	Heritage study		

Data entry: Data first entered: 05/08/2014

Data updated: 14/05/2015

Status: Completed

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: Former industrial buildings accessed from Maddox Road, looking north-east

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 15/11/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455763cc93a9374d2ab26e104fdb930b9.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3455763cc93a9374d2ab26e104fdb930b9.jpg

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: Former industrial buildings accessed from Maddox Road, looking south-west

Copy right: City of Sydney

Image by: Claudine Loffi

Image date: 03/03/2014

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3452c047fa5cb0a4eb58d9001d97e215605.JPG>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3452c047fa5cb0a4eb58d9001d97e215605.JPG

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: Interiors of former industrial buildings off Maddox Street

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 15/11/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345b6052bbaeccc412b91478a0c8b9ae5bb.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345b6052bbaeccc412b91478a0c8b9ae5bb.jpg

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: One of the former industrial buildings accessed from Euston Road, showing outline of demolished bay

Copy right: City of Sydney

Image by: City Plan Heritage and JCIS Consultants

Image date: 15/11/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3453b6efb0172ee4ef88ecf60d3da58f357.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3453b6efb0172ee4ef88ecf60d3da58f357.jpg

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: 1943 aerial photo of the site, with an overlay showing land parcels

Copy right: Lands and Property Information

Image by: RTA

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a4114bd67c704680943269d89f166219.png>

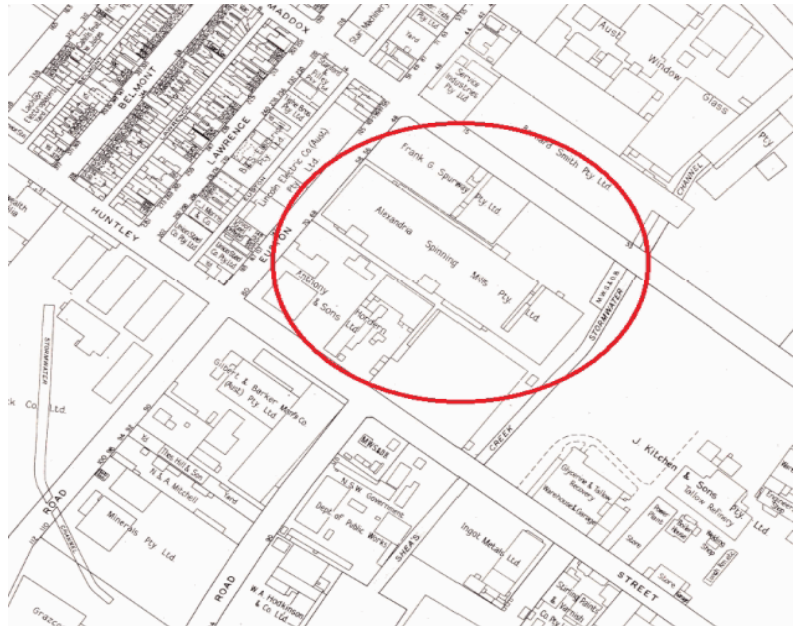
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a4114bd67c704680943269d89f166219.png

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing the subject site, nearby stormwater channel and industries

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3459de66c9ffc7143cabaa1825760bdcee6.png>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3459de66c9ffc7143cabaa1825760bdcee6.png

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: One of many newspaper articles about the strikes in 1940

Copy right: The Mercury

Image by: The Mercury

Image date: 30/09/1940

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3451c33c0516bf241ebb6296e01ceb1c7c0.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3451c33c0516bf241ebb6296e01ceb1c7c0.jpg

Item name: Former Alexandria Spinning Mills including interiors

Location: 40A-42 Maddox Street Alexandria 2015

Sydney

Image:



Caption: Sun-glo and Twin-Prufe knitting books produced by the Alexandria Spinning Mills

Copy right: National Wool Museum, Victorian Collections

Image by: National Wool Museum, Victorian Collections

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345a667912145ce4f57adcf0b2674a498f3.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345a667912145ce4f57adcf0b2674a498f3.jpg

Inventory 15

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Address: 1-3 Mandible Street

Planning: Sydney South

Suburb/nearest town: Alexandria 2015

Local govt area: Sydney

State: NSW

Parish:

County:

Other/former names: STC, Alcatel Australia Ltd

Area/group/complex:

Group ID:

Aboriginal area: Eora

Curtilage/boundary: As described in Sydney Local Environmental Plan

Item type: Built

Group: Manufacturing and Processing

Category: Factory/ Plant

Owner: Private - Corporate

Admin codes:

Code 2:

Code 3:

Current use: Commercial

Former uses: Industrial / commercial

Assessed significance: Local

Endorsed significance:

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Statement of significance: Built in 1945 for communications manufacturers, Standard Telephone & Cables, this building represents the industrial development of Alexandria during the mid-twentieth century. It is historically significant for its connection to Australian manufacturing of radios, cables, and telephones. As the place where these products were made for Standard Telephone & Cables, this building provides evidence of major technological advancements in communications and the high demand for these products during the twentieth century.

The building represents the only remaining intact building erected for Standard Telephones & Cables Pty Ltd at Alexandria. Standard Telephones & Cables was a well-known technology company which provided communications equipment for World War II and became the backbone of Australia's communications during peace-time. The building at 1-3 Mandible Street demonstrates the later expansion of this company likely as a result of the high demands of World War II.

Architecturally, the building represents a late example of an inter-war functionalist industrial building. It exhibits typical features of this architectural style including its simple geometric massing, polychromatic face brickwork, parapet wall, horizontally-proportioned multi-paned steel windows, chamfered corner, and continuous lintels, brickwork of the spandrel, piers and string courses expressing the horizontality of facades. The prominent corner site and robust building form give the building landmark qualities in the local neighbourhood, where it marks the junction of Wyndham and Mandible streets. The building makes an important contribution to the streetscapes of Wyndham and Mandible streets, and is visible from a number of near and distant vantage points. The tapered skylight roof form is relatively rare for the Sydney local government area.

As one of southern Sydney's major employers of the time, which invested in the welfare and working conditions of its employees, the building is likely to have social significance to the former employees of Standard Telephones and Cables.

The site may also hold significance to the Australian community and former Australian military personnel for its connection to the radios, telephones and other communications technology manufactured at this site, which were found in many Australian households during the twentieth century and were used by the Australian Army, Navy and Air Force and the United States force in the Pacific during World War II. These devices represented major technological advancements of their time for Australian households and the war effort, as well as major social change through improved long-distance communications.

The former Standard Telephone & Cables building forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

The former Standard Telephones & Cables Pty Ltd is of local heritage significance in terms of its historical, associations, social, and representative values.

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Historical notes of provenance:

Early development of the locality:

This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The suburb of Alexandria was once part of a vast sand dune system covered by heath, low scrub, creeks and freshwater wetlands that dominated the landscape of the southern suburbs of Sydney. It provided a habitat for a range of fauna such as birds, fish and eels, and was a good food source for the Gadigal, the local Aboriginal people.

The land that today incorporates the areas of Alexandria, Waterloo, Zetland and Rosebery was originally one large estate. Originally granted to former convict and public servant William Hutchinson in 1823, the estate, its buildings and water mill, were then sold to Daniel Cooper and Solomon Levy in 1825 before Cooper became its sole owner in 1833.

For a large part of the nineteenth century, the area was semi-rural low-lying land with swamps. The principal activities were market gardening, dairying and wool-washing. A number of dams were built in this area, including the Little Waterloo Dam, the Big Waterloo Dam and the Upper Dam, as shown on 1885-1890 Higinbotham and Robinson maps of Alexandria and Waterloo.

Waterloo Council was formed in 1860. The municipality of Alexandria was separated from Waterloo and became the Borough of Alexandria in 1868. The area was connected to the city through a network of trams extending along Botany Road and Elizabeth Street.

The land of the Cooper Estate was progressively subdivided into small acreages and sold for residential purposes in 1872 and 1884 with the final sale taking place in 1914. The release of the Cooper Estate opened up large tracts of land for industrial uses at a time when surrounding areas had become more densely populated. This resulted in the relocation of many industrial establishments from Redfern and Surry Hills to the Alexandria and Waterloo area.

This intensive period of industrial development increased land value in the area and forced out all but a few of the remaining market gardeners. Fellmongering, tanning and wool-washing industries were typical of Alexandria. The wetlands of the area offered ideal features for these industries which needed to be located close to a plentiful water supply.

By 1943 an Alexandria Council celebratory publication claimed that Alexandria was the largest industrial municipality in Australia, proudly proclaiming that 'an area of 1,024 acres has been crowded not less than 550 factories' (Alexandria Municipal Council 1943, p78). Secondary industries declined in the area from the 1970s as industry expanded to the outer suburbs.

Industrial history:

As one of only two major centres for historic Australian industry during the period when industry was centred in cities, City of Sydney's industrial development is part of the national history of industrialisation. Australia's industrialisation formed part of the 'second industrial revolution' which began during the mid-nineteenth century. This second revolution was driven by major technological innovations including the invention of the internal combustion engine and the assembly line, development of electricity, the construction of canals, railways and electric-power lines.

Sydney's twentieth century industrial development records when and how Sydney became one of the largest industrialised cities in the South Pacific and the diversification of Australia's economy beyond primary industry. Together with Melbourne, Sydney's twentieth century industrial boom expanded Australia's economy from the 'sheep's back' to the 'industry stack' or from primary production to manufacturing. By 1947 more Australians

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

were working in city industries than in farms or mines.

Sydney's industrial development not only impacted on the national economy. Twentieth-century industry in Sydney also played a major role in developing Australia's self-sufficiency, growth, urbanisation, society and its contribution to the war effort for World War II. Sydney's industrial development has affected the lives of many Australians directly and indirectly, whether through the number of workers employed, goods and technology produced, the prosperity it engendered, or the social change and urban environments it generated.

Site history:

This building was constructed by Standard Telephones and Cables Pty Ltd (STC) in 1945 as part of the World War II period of expansion when its major factory complex site on Botany Road, on the opposite side of Wyndham Street, reached capacity.

Standard Telephones & Cables Pty Ltd was a well-known communications technology company that provided communication equipment during war-time and subsequently became the backbone of Australia's communications during peace-time.

The company was established in Australia in the 1920s as an independent subsidiary of the British Standard Cables and Telephones to manufacture radio receivers, transmitters and telephone equipment. The Australian subsidiary of this company was established by engineer Sandy McPhee who set up a new factory in Chippendale in the early 1920s. Radios from 1923 to 1926 were imported from Britain under the brand "Western Electric". From 1926 the company brand became known as "STC". Radio transmission equipment was sold to 2FC and 2BL in Sydney and 2CY in Canberra, amongst other regional and interstate radio stations.

The business later expanded to manufacture valves (tubes) and military equipment. The Standard Telephones & Cables contributed to the World War II effort through the production of radio and communication apparatus. As well as manufacturing communications equipment for the Australian Army, Navy and Air Force in World War II, the company supplied communications equipment to the United States forces in the Pacific under the Lend-Lease agreement (STC, 50 years, 1895-1945).

The company had outgrown its earlier site in Chippendale by the 1930s. By 1936 the business commissioned a new factory at Botany Road, designed by the prominent architects Robertson & Marks. This merged its Redfern and Chippendale factories together with the administration staff at the city office in a single location on a site dedicated to manufacturing telecommunications equipment and systems. Originally the factory extended over a large complex of 30,000 square feet (STC, 50 years, 1895-1945, p 9). By 1939, the factory floor had grown to 75,000 square feet. During the 1940s, the company continued enlarging. By 1943 it occupied a site of approximately 200,000 square feet.

The subject corner building at 1-3 Mandible is likely to have been designed by the prominent architectural firm, Robertson & Marks, due to design similarities with the rest of the industrial complex. The land for this building was purchased by Standard Telephones and Cables Pty Ltd on 26 September 1944 on the site located directly opposite the company's main works on Botany Road (Old System Deed, No 261 Bk 1951). Records show that a brick factory was under construction in 1945 when this land was valued on 23 March 1945 (Valuer-General, Valuation Lists, Alexandria, SRNSW 19/8587, No 307).

STC was a major employer of the area, employing over 2,000 people. In 1943, the company's payroll is estimated to have reached over half a million pounds, indicating the scale of its workforce. They were also noted to have exceptional working conditions, with no expenses being spared for good working conditions and natural light.

In 1941, the size of the workforce, its mostly female demographic and the company patriotism during World War II was demonstrated in photos of the ceremony when STC workers, all in STC uniform, donated an ambulance to the war effort.

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

The buildings of Standard Telephones & Cables were designed with optimal natural lighting and highly efficient artificial lighting. They were recognised in the trade as one of the most outstanding examples of modern artificial lighting in Sydney.

The company history published in approximately 1945 included a retouched photo of these offices. The offices were then shown as a two-storey brick building with sawtooth roofs containing south-facing windows (STC, 50 years, 1895-1945, p 34-5).

By the end of the war, there was no further room to expand the factory at Botany Road. STC therefore expanded to land it purchased at Villawood (STC, 50 years, 1895-1945, p 9).

On 24 March 1950, Standard Telephones and Cables Pty Ltd applied to convert the Old System Title to Torrens Title (RPA 37355). The land remained in the ownership of Standard Telephones and Cables Pty Ltd until approximately 1970 (CT 6415 f 42).

In 1987 the company was purchased by Alcatel Australia Limited.

Themes:	National theme	State theme	Local theme
	3. Economy	Industry	Factories
	3. Economy	Communication	Telephones & Cables
	4. Settlement	Towns, suburbs and villages	Development
	3. Economy	Commerce	Warehouses

Designer: Likely to have been designed by Robertson & Marks

Builder:

Year started: 1945

Year completed: 1945

Circa: Yes

Physical description: The building was constructed in 1945 for Standard Telephones and Cables on the prominent corner site at the junction of Mandible and Wyndham Streets, along the south bank of the Shea's Creek stormwater channel. The building is two-storeys in height, constructed of face brick, with no setback from the two street frontages. The building is contained under seven joined sawtooth roofs of an unusual tapered form with south-facing lanterns. The sawtooth roofs are partly concealed by high parapet walls along all elevations.

The building represents a late example of an industrial building designed in the inter-war functionalist architectural style. It exhibits typical features of this architectural style including its simple geometric massing, polychromatic face brickwork, parapet wall, horizontally-proportioned multi-paned steel framed windows, chamfered corner, and continuous lintels, brickwork of the spandrel, piers and string courses expressing the horizontality of facades.

The main access is located on the chamfered corner, featuring a pair of decorative metal doors, polychromatic brick surrounds. A stair tower is located along the northern side elevation, contained under a gabled roof. A small wing is located along the western elevation, setback from Mandible Street.

Internally, the roof, foundations and floor structures have not been inspected by the authors.

Category: Individual building. Style: Inter-war functionalist. Storeys: Two. Facade: Face brick. Windows: Rectangular steel framed. Roof: Saw-tooth with tapered skylights.

Physical condition level: Good

Physical condition:

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Archaeological potential level: Not assessed

Archaeological potential Detail:

Modification dates:

Recommended management: The building should be retained and conserved.

A Heritage Assessment and Heritage Impact Statement should be prepared for the building prior to any major works being undertaken.

All conservation, adaptive reuse and future development should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Archival photographic recording, in accordance with Heritage Council guidelines, should be undertaken before major changes.

Do not paint or render face brick finishes.

Face brickwork, lintels and string courses, saw-tooth roofs, parapet wall, multi-paned steel-framed windows, chamfered corner, early signage, metal entrance doors, polychromatic brickwork surrounds to the main entrance and other original building features should be maintained and conserved.

Consider new uses for the building that will re-use and expose its industrial features to retain the building's former industrial character as an integral part of the new use. Alterations for a new use, including changes for compliance with Australian building standards, should allow the essential form of the building to remain readily identifiable.

Management: **Management category**
Statutory Instrument

Management name
List on a Local Environmental Plan (LEP)

Further comments: Heritage inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Criteria a): [Historical significance] Built in 1945 for communications manufacturers, Standard Telephone & Cables, this building represents the industrial development of Alexandria during the mid-twentieth century. It is historically significant for its connection to Australian manufacturing of radios, cables, and telephones. As the place where these products were made for Standard Telephone & Cables, this building provides evidence of major technological advancements in communications and the high demand for these products during the twentieth century.

The building represents the only remaining intact building erected for Standard Telephones & Cables Pty Ltd at Alexandria. Standard Telephones & Cables was a well-known technology company which provided communications equipment for World War II and became the backbone of Australia's communications during peace-time. The building at 1-3 Mandible Street demonstrates the later expansion of this company likely as a result of the high demands of World War II.

The former Standard Telephone & Cables building forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Criteria b): This building has significant associations with the twentieth century operations of Standard Telephones & Cables Pty Ltd., a well-known communications technology company, from 1945 to the 1970s. The building design is also likely associated with the prominent architectural firm of Robertson & Marks, which designed other buildings on the larger site for this company.
[Historical association significance]

Criteria c): Architecturally, the building represents a late example of an inter-war functionalist industrial building. It exhibits typical features of this architectural style including its simple geometric massing, polychromatic face brickwork, parapet wall, horizontally-proportioned multi-paned steel windows, chamfered corner, and continuous lintels, brickwork of the spandrel, piers and string courses expressing the horizontality of facades.
[Aesthetic/Technical significance]

The prominent corner site and robust building form give the building landmark qualities in the local neighbourhood, where it marks the junction of Wyndham and Mandible streets. The building makes an important contribution to the streetscapes of Wyndham and Mandible streets, and is visible from a number of near and distant vantage points. The tapered skylight roof form is relatively rare for the Sydney local government area.

The building also demonstrates the high standard of working conditions and employee welfare which was a known value of Standard Telephones and Cables. The building was designed for optimal natural lighting, as well as highly efficient artificial lighting which was recognised in the trade as one of the most outstanding examples of modern artificial lighting in Sydney.

The building likely represents the work of the prominent architectural firm, Robertson & Marks, who designed other buildings on this larger site for Standard Telephone & Cables.

Criteria d): Social significance requires further study to ascertain its value to communities.
[Social/Cultural significance] As one of southern Sydney's major employers of the time which employed over 2,000 people and which invested in the welfare and working conditions of its employees, the building is likely to have social significance to the former employees of Standard Telephones and Cables. In 1943, the company's payroll is estimated to have reached over half a million pounds, indicating the scale of its workforce.

The site may also hold significance to the Australian community and former Australian military personnel for its connection to the radios, telephones and other communications technology manufactured at this site, which were found in many Australian households during the twentieth century and were used by the Australian Army, Navy and Air Force and the United States force in the Pacific during World War II. These devices represented major technological advancements of their time for Australian households and the war effort, as well as major social change through improved long-distance communications.

Criteria e):
[Research significance]

Criteria f): The building is rare as the only intact remaining building of the former Standard Telephones & Cables industrial site. Within the Mandible and Wyndham Street streetscapes, it is also a rare example of intact inter-war functionalist building. Its tapered skylight roof form is relatively rare in the Sydney local government area.
[Rarity]

Criteria g): The building represents a good example of a late inter-war functionalist industrial building.
[Representative]

Intactness/Integrity: Relatively intact externally.

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

References:	Author	Title	Year
	Dr Terry Kass	Industrial and warehouse buildings research - site history	2014
	Standard Telephones and Cables Pty L	Standard Telephones and Cables Pty Ltd, 50 years, 1895-1945:	1945
	RTA	Aerial Photographs of Sydney May-June 1943	1943
	City of Sydney/ City Building Survey	City Building Surveyors Detail Sheets	1956
	Scott Cumming	Chimneys and Change: Post European Environmental Impact i	2004
	Frances Pollon	The book of Sydney suburbs	1996
	Higinbotham & Robinson	Alexandria / Waterloo, Sydney	1890
	Alexandria Municipal Council	Alexandria, "the Birmingham of Australia" 75 years of progres	1943
		The Cyclopaedia of New South Wales, p416-417	1907
	Land Titles Office	Book A No.49, 25 January 1825	1825
	City of Sydney	Aerial Survey of the City of Sydney	1949

Studies:	Author	Title	Number	Year
	City Plan Heritage	City of Sydney Industrial and Warehouse Buildings		2014

Parcels:	Parcel code	Lot number	Section number	Plan code	Plan number
	LOT	1		DP	87355

Latitude:

Longitude:

Location validity:

Spatial accuracy:

Map name:

Map scale:

AMG zone:

Easting:

Northing:

Listing:	Name	Title	Number	ListingDate
	City of Sydney Industrial and Ware	Heritage study		

Data entry: Data first entered: 18/07/2014

Data updated: 14/05/2015

Status: Completed

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Chamfered south-east corner of the building at junction of Mandible and Wyndham Streets

Copy right: City of Sydney

Image by: City Plan Heritage

Image date: 16/08/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3459950484db7884d56abdabb0f1a14de6f.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3459950484db7884d56abdabb0f1a14de6f.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Northern and eastern elevations of the building viewed from Wyndham Street

Copy right: City of Sydney

Image by: City Plan Heritage

Image date: 16/08/2013

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345ef60e3d910e8454589e814699127ac79.jpg>

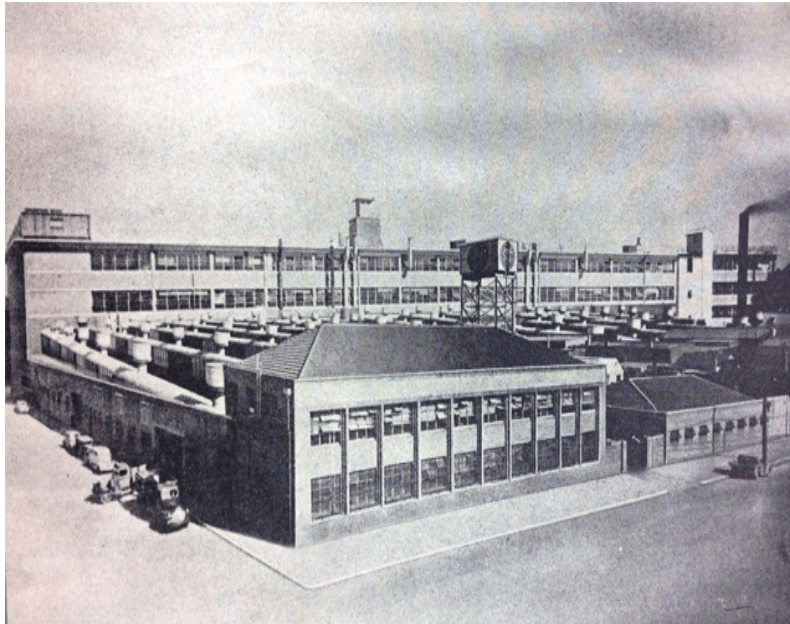
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345ef60e3d910e8454589e814699127ac79.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Standard Telephones and Cables site in 1943

Copy right:

Image by: Alexandria Municipal Council

Image date: 01/01/1943

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3455dcde7a94d74ecfb4cf4bb619723b03.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3455dcde7a94d74ecfb4cf4bb619723b03.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: The building in 1945 with sawtooth roofs and large areas of glass for natural lighting

Copy right:

Image by: Standard Telephones and Cables Pty Ltd, 50 years, 1895-1945

Image date: 01/01/1945

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345c3f8c4663f0d4af784167b2789debf04.jpg>

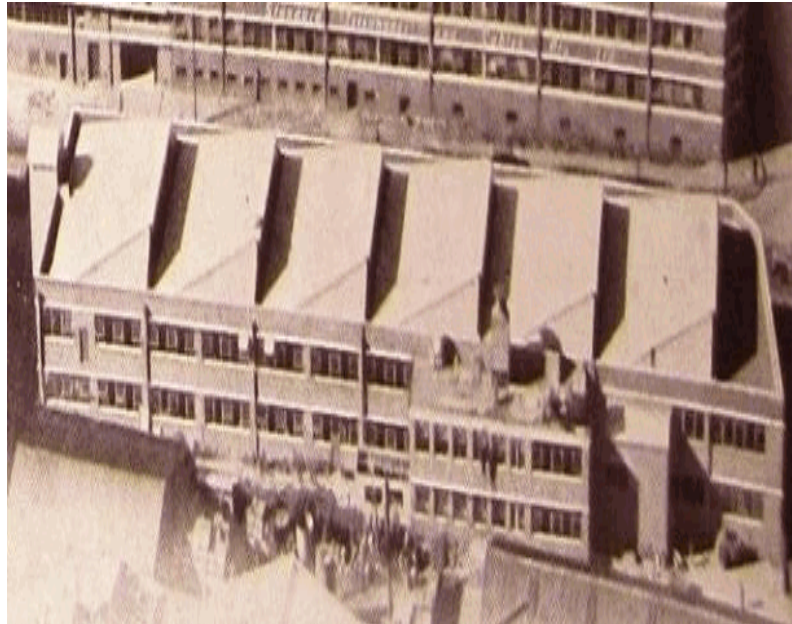
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345c3f8c4663f0d4af784167b2789debf04.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Western elevation and roof of the subject building in 1945

Copy right:

Image by: Standard Telephones and Cables Pty Ltd, 50 years, 1895-1945

Image date: 01/01/1945

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/34549866181ddc64ce8a24269de2a3e1104.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test34549866181ddc64ce8a24269de2a3e1104.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Subject building (left) in 1940s looking north on Wyndham Street

Copy right: City of Sydney archives

Image by: City of Sydney Archives SRC14184

Image date:

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3458e88190dae304ff6a1dd42e80c96be5f.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3458e88190dae304ff6a1dd42e80c96be5f.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: 1941 presentation of ambulance by the staff of Standard Telephone & Cables (SLNSW hood_30751)

Copy right: State Library of NSW

Image by: Sam Hood

Image date: 01/10/1941

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345d4db2372e6384eb4a235118c4fc1753a.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345d4db2372e6384eb4a235118c4fc1753a.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Uniformed workers of STC in 1941 as they presented an ambulance (SLNSW, hood_30748)

Copy right: State Library of NSW

Image by: Sam Hood

Image date: 01/10/1941

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/3454555f3ca374dfd8353109d2b9baacc.jpg>

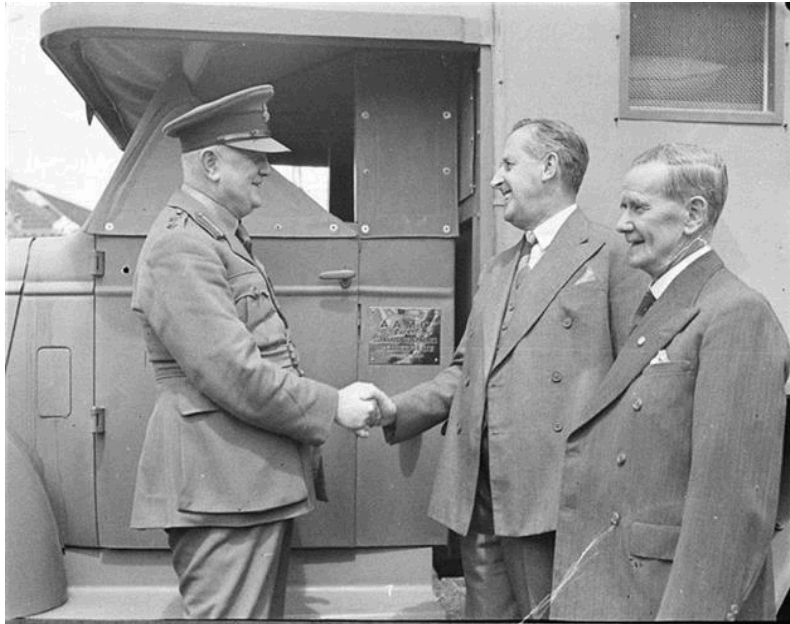
Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test3454555f3ca374dfd8353109d2b9baacc.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: 1941 presentation of ambulance by the staff of Standard Telephone & Cables (SLNSW, hood_30746)

Copy right: State Library of NSW

Image by: Sam Hood

Image date: 01/10/1941

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345b9677b83b81c4ffdb0280c38933a0d54.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345b9677b83b81c4ffdb0280c38933a0d54.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Uniformed workers of STC in 1941 as they presented an ambulance (SLNSW, hood_30747)

Copy right: State Library of NSW

Image by: Sam Hood

Image date: 01/10/1941

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345150edfdd614d4097af0597353ca94749.jpg>

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Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Aerial showing the Standard Telephones and Cables site, bounded in blue , in 1949

Copy right: City of Sydney archives

Image by: City of Sydney

Image date: 15/12/1949

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345daa1dea418834cca9783e8ff76d78ff6.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345daa1dea418834cca9783e8ff76d78ff6.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: 1956 detail sheet showing the subject site, circled, and surrounding industries

Copy right: City of Sydney archives

Image by: City Building Surveyors Department, City of Sydney

Image date: 01/01/1956

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/3459068a7cf5a794e9a81826af15a62b376.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAP/P/Thumb_test3459068a7cf5a794e9a81826af15a62b376.jpg

Item name: Former Standard Telephones & Cables industrial building including interiors

Location: 1-3 Mandible Street Alexandria 2015

Sydney

Image:



Caption: Some of the domestic radios produced by the company

Copy right:

Image by: Standard Telephones and Cables Pty Ltd, 50 years, 1895-1945

Image date: 01/01/1945

Image number:

Image url: <http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/345e7150679a2b5472e9c709c82f3267c33.jpg>

Thumbnail url: http://www.environment.nsw.gov.au/maritimeheritageapp/resources/Heritage/shi/WebAPP/Thumb_test345e7150679a2b5472e9c709c82f3267c33.jpg