

NATIONAL TRUST REGISTER LISTING REPORT

INDUSTRIAL HERITAGE SITE

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TOWN/DISTRICT/S UBURB	NAME OR IDENTIFICATION OF SITE	ADDRESS OR LOCATION
Ultimo POSTCODE: 2030	Ultimo Power House Former Turbine Hall, Boiler Houses and Switch house (now: The Powerhouse Museum)	500 Harris Street, cnr William Henry St, Ultimo

LGA:	Sydney City Council	GRID:	UTM
OWNER & ADDRESS:	NSW Dept of the Arts - Powerhouse Museum	MAP:	
		REFERENCE:	Lat: Long:
PROPONENT:	INDUSTRIAL HERITAGE COMMITTEE	SECTION:	
APPROVAL DATE:	24 June 2015	CATEGORY:	Electricity Generation Tramways

DATE OF PROPOSAL: March, 2015

AUTHOR: TB

STATEMENT OF SIGNIFICANCE:

The former Ultimo Power House is historically significant for being the first large state-owned electricity generating station in NSW and the original generating station for the supply of electricity to power the electric tramway network throughout Sydney. It was one of the largest and most important generating stations in NSW for many years and has associations with the electrification of the suburban tramway and railway systems and with the general reticulation of electrical power in Sydney. It was the site where most major technological advancements in electrical generation, including steam turbines and large-scale, alternating-current generation, were trialled by NSW electricity authorities. The station also played a major part in the development of the Ultimo/Pymont area.

The power station buildings are a landmark group of buildings which relate closely to the visual and architectural industrial context of the area. The Boilerhouse building was, in its day, one of the largest brickwork structures in the state and the chimneys were significant Sydney landmarks for seventy years. Furthermore, the adaptive work undertaken for the station's conversion to the Powerhouse Museum is significant both for its successful re-use of the buildings and successful integration of old and new buildings; the new building was awarded the Sulman Medal by the RAI in 1988.

The Ultimo Power House was adapted to house the Museum of Applied Arts and Technology (later, the Powerhouse Museum), the principal museum of technology, manufacturing, science and craft in NSW and retains the historical, aesthetic and cultural associations of this Museum dating back to the International Exhibition in the late nineteenth century. It is an ongoing repository for the exhibition of the finest examples of the skill and industry of the country and has an educational and research role in these areas as part of its operation.

In this context, it has social significance for many Sydneysiders for whom the Powerhouse Museum represents an important educational and cultural experience and a communal commitment to honouring the past and those who have been significant in the evolution of modern Australian society.

HISTORY:

The development of the tramway public transport system had its beginnings in a horse drawn tramway along Pitt Street between Circular Quay and the Redfern Railway Terminal, which opened in 1869. A steam powered network developed from the 1870s, first running through the city only, then rapidly expanding as a commuter service from suburban areas. Steep topography saw the addition of cable drawn trams in North Sydney and towards Rose Bay from the city during the 1880s. In 1893, the first complete electrically-powered tramway line opened on the north shore and its success led to the decision to adopt electric power for the tramway system overall. A single large electricity generating station was deemed necessary to provide this power and the first stage of the Ultimo Power Station opened in December, 1899.

The first of the all-electric tramcar sheds, Ultimo Tram Depot, opened at the same time at the south end of the Power Station site (and has been separately nominated). Conversion of the tramlines proceeded rapidly and expansion of the power station followed in stages.

In 1905, Ultimo Power House was the first place where turbine-driven alternators were tried in Australia and it was, until the 1940s, the location where the first examples of most major developments in power generation technology, including mechanical boiler feed and, later, the use of pulverised coal, were tried in Australia. It was also amongst the largest of any generating stations operating in Australia till the 1940s. It was a major employer and its function of power generation brought further development to the surrounding area. At the same time, its landmark chimneys were the source of ash fallout problems for local people.

In the 1920s, electrification of the suburban railway led to substantial extension and re-equipping of Ultimo Power House and the White Bay Power Station also commenced operations as the second of the New South Wales (NSW) Railway and Tramways Department generating stations. These two worked closely together until the 1950s, when all the power generation facilities of the state were brought together under the NSW Electricity Commission, a central government authority formed to deal with the chronic post-war power shortages in NSW. As the interconnected network expanded and new generation power stations were completed and brought on line, Ultimo's old machinery and city location saw its progressive redundancy and it closed in 1964. Allied to this was the closure of the tramway system, in favour of motor busses, which was underway from the 1950s and was complete by 1963. The power station was then stripped and lay dormant until the decision in 1979 to use it as the new location for the Museum of Applied Arts and Sciences (formerly the Technological Museum).

The Power Station was substantially modified for its use as the Powerhouse Museum. The interior of the buildings were cleared, new internal floors and spaces created and new buildings were erected on the western side. The Ultimo tram depot, adjacent to the power station, opened as Stage One in 1981; this later became offices, workshops, laboratories and storage for the Museum in the Powerhouse buildings. The Powerhouse Museum proper opened to the public in March 1988, as the flagship exhibition space of the Museum of Applied Arts and Sciences (MAAS).

DESCRIPTION:

The remains of the Ultimo Power House are four interconnected buildings which were the Engine-house and Turbine Hall, the (2nd) Boilerhouse, the Office Building and the Switchhouse. All equipment from the power station phase has been removed from the interiors and exteriors of the buildings and the buildings survive as external shells, adapted to the new use as a Museum.

OFFICE BUILDING

The office building is a three storey symmetrical building, 30m wide and 14m deep, with seven bays, built in a simplified Italian Renaissance Classical style. It faces William Henry Street and is partly obscured by the William Henry Street Bridge. The rusticated stone base supports a stone plinth on which sits the brick superstructure. The articulation continues in the form of brick pilasters with a sandstone entablature, above which is a brick parapet. On the ground floor, window mullions are in the form of classical pilasters, while on the top floor they are plain. Beneath each window is a spandrel infilled with bricks in herringbone pattern. The frontispiece is in the form of an aedicule two stories high, with large-scale stone pilasters on stone

pedestals, surmounted by a pediment. Within the frontispiece is an entrance having semicircular arch with a console keystone. The principal feature in the aedicule is the spandrel which identifies the building's ownership as the New South Wales Government Transport Department (NSWGTD). Surrounding the name of the building is a band of lightning bolts, a stylised representation of electricity, which passes behind a decorated floriated crest incorporating the Southern Cross. The spandrel was once surmounted by a leadlight window which bore the State Coat of Arms.

On the top floor, each pair of pilasters, on the east and west ends, is gathered over a semi-circular opening which makes the semi-circular arched windows appear recessed. The building has a distinguished architectural composition shown in brickwork, windows and facades. The bricks are very fine plastic-moulded and have a warm red-brown colour and pointed with a light red-brown mortar. The work throughout is English bond except in the spandrels where it is herringboned. The robust cedar window joinery is very fine and is consistent with the time of building. The repetition of the pilasters, spandrels and windows on the north, east, and west facades adds to the careful ornamentation of the building.

All that remains of the old boiler house on the eastern side of the Office Building is the remains of the first chimney stack and the flashing outline of the gable roof in the brickwork of the second boilerhouse.

THE ENGINE ROOM AND TURBINE HALL

Contemporaneous with the office building but different in concept and design is the engine room. It is approximately 30m wide and 30m deep and is, in effect, an extension of the office building. The bricks, still laid in English bond, are brown-grey and the character of the building is much more utilitarian. The pilasters are strengthening devices and divide the west front (the building's only facade) into five bays with paired windows. The openings of the metal framed windows are segmental-arched and each brick sill runs the length of the window only and not the length of the bay, as on the office building. The facade is completed by a parapet which conceals the box guttering. Beneath the parapet is a double stringcourse of brickwork.

The Turbine Hall, an extension eastwards of the Engine Room, is a very simple, very strong expression of the utilitarian architecture of the early 20th century and one of the prime large examples of Edwardian industrial architecture in Sydney. Its size, 56m x 31m, reflects the size of the turbo alternators it was designed to house. The facade is divided into eight bays, which are further proportioned by a horizontal band which divides the facade into sixteen elements. The west facade's principal quality is its sheer scale which is enhanced by very carefully controlled simplicity. Emphasising the main articulation of the facade is a moulded stone stringcourse at the sill level of the upper windows and a moulded stone cornice capping the top of the parapet.

The main elements are the very tall, semi-circular headed windows. These main windows have stone sills and the window bays, flanked by pilasters, terminate in stepped brick corbels and are surmounted by a stone gable cornice.

THE SWITCH HOUSE

The switch house is a brick building, three stories on the east and two stories above ground level on the west. The west facade is divided into seven bays, the northernmost of which is given emphasis by means of a dentillated gable which incorporates a centrally-placed circular motif with herringbone infill. The remainder of the building features a dentillated segmented extension of the parapet. The brickwork between each pair of windows extends even higher and terminates in dentillated bracketed caps. All dressings, sills, lintels and caps are of rendered concrete.

THE 2nd BOILER HOUSE

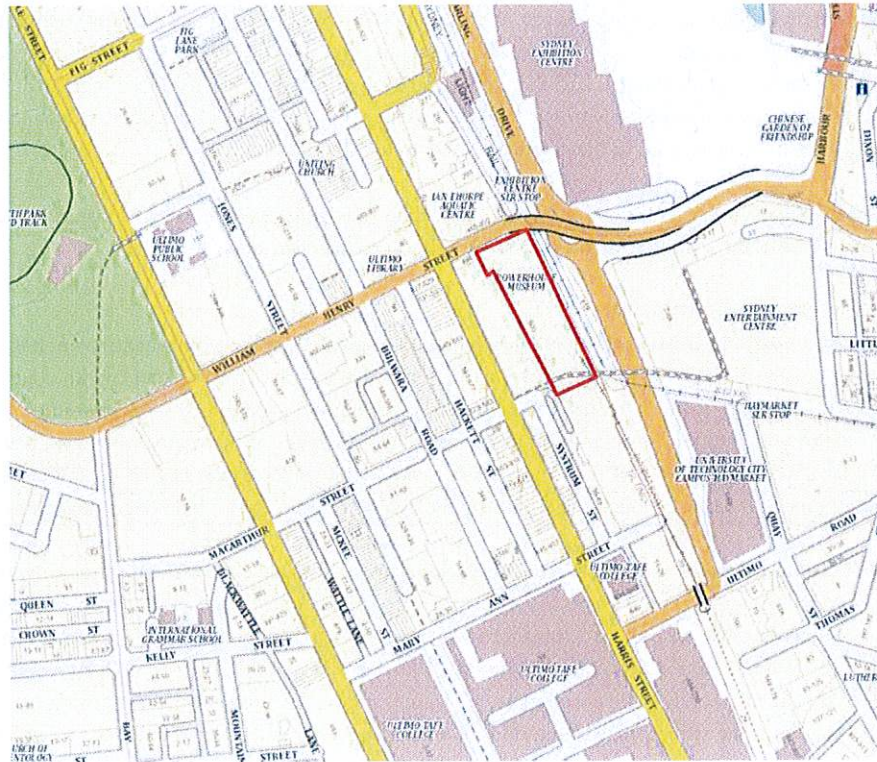
The second boiler house is the largest building in the complex, 83m long and 23m wide, and has the largest continuous facade to the east. The three tiers of windows, arranged in thirteen bays, are a vigorous architectural solution to the problem of dealing with a very tall facade. The height from string course to plinth is much greater than on the west facade of the turbine hall, which it complements.

The thirteen bays are evident on the top tier of the building, above the string course. Below that, the fourth and fifth bays from the north end were combined to form a tripartite entrance bay, which allowed access to rail trucks on the east siding. The south facade of the boiler house, although abutting the turbine hall and matching it in size, was treated somewhat differently, preserving the individuality of the building. The pilasters, their terminations in stepped corbels and the gable cornices are the same but the windows are smaller, arranged in two tiers and segmental-headed, as on the east facade.

BOUNDARY OF LISTING

The listing includes the surviving elements of the Ultimo Power House, bound by Harris St, William Henry St, Mary Ann St and the Sydney Light Rail Line. The new building fronting Harris St is not included in this listing.

SITE PLAN:



BIBLIOGRAPHY:

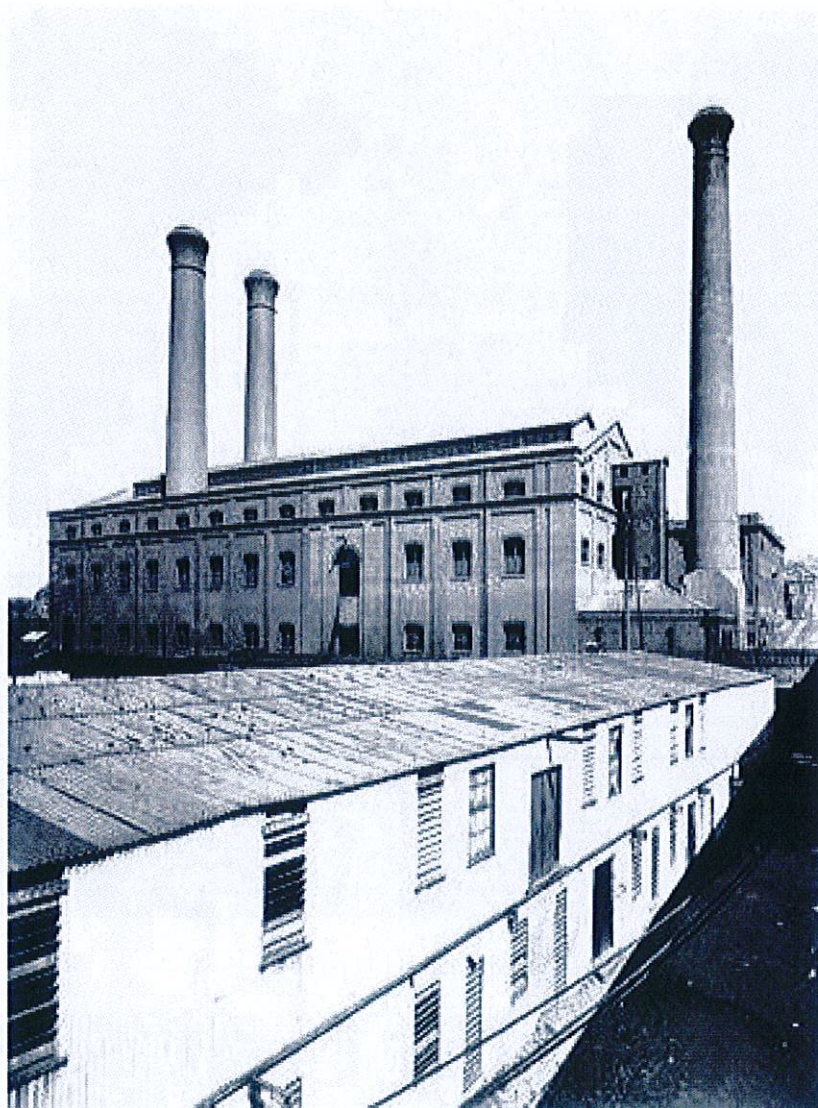
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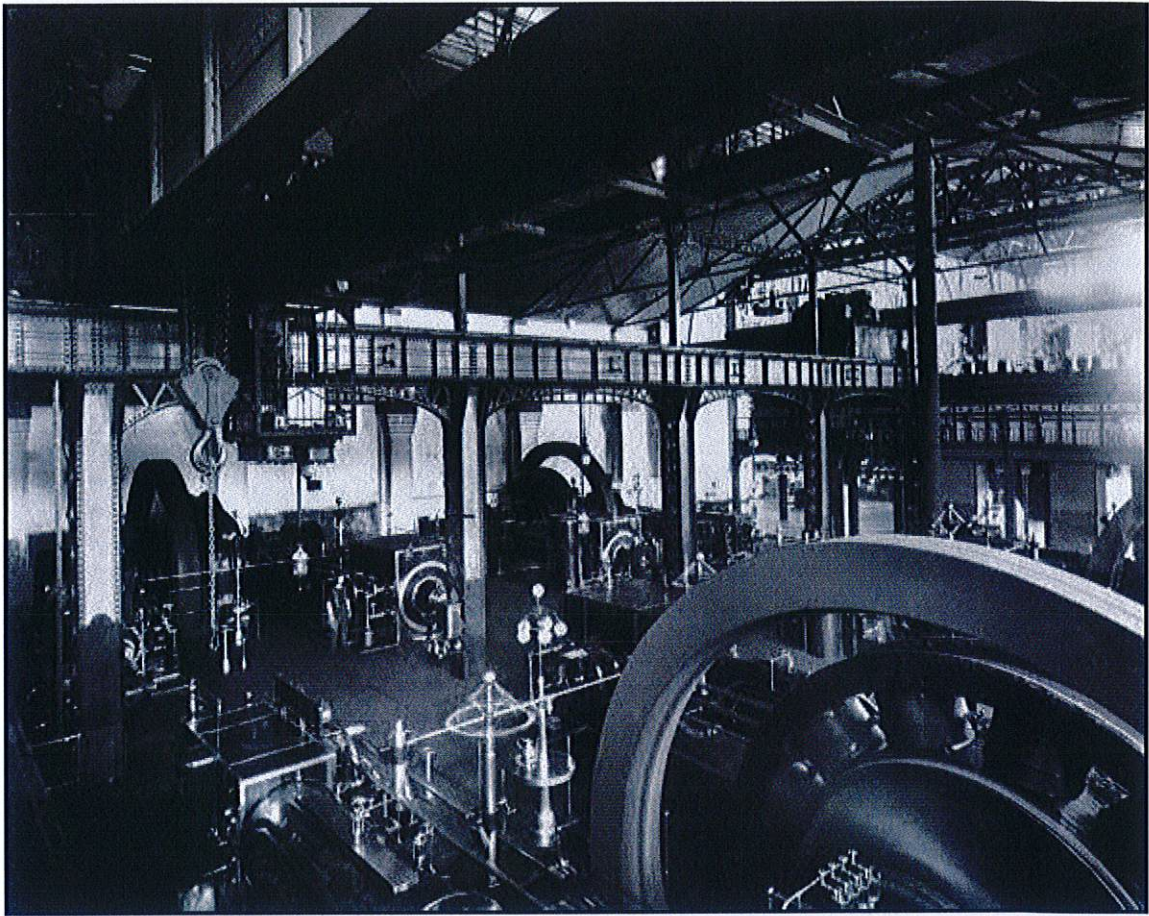
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PHOTOGRAPHS:



The Ultimo Power House in operation in the 1930s. (Source: SLNSW)



The original engine Room at Ultimo Power House (Source: SLNSW)



The former Power House Office Building fronting William Henry St. (Source: Google Streetview)

