

NATIONAL TRUST REGISTER LISTING REPORT

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CITY/SUBURB/TOWN ULTIMO	NAME OF IDENTIFICATION Powerhouse Museum	ADDRESS OR LOCATION 500 Harris Street
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LGA:	Sydney City	ABORIGINAL NATION:	The Eora People of the Cadigal Band
POSTCODE:	2007	LOT/DP:	Lots 1 & 3 DP 631345, Lot 1 DP 781732, Lot 1 DP 770031 & Lot 1 DP 801428
COMMITTEE:	Built Heritage Advocacy Committee	GRID:	Lat: -33.878457 Long: 151.199701
AUTHOR:	Graham Quint, Graeme Aplin	LISTING DATE:	29 July 2015

STATEMENT OF SIGNIFICANCE:

The Powerhouse Museum at 500 Harris Street, Ultimo, has significance as its recycling design from "Power House" to "Powerhouse Museum" was the first project ever to have been nominated for three categories in the National Architecture Awards, clearly indicating its quality and national significance. In the Architecture Australia Awards 1988 it won the President's Award for Recycled Buildings and the Belle Interiors Award for Interior Design, and was a finalist for the Sir Zelman Cowen Award for Non-Residential Works. The awards documentation states that:

'This project demonstrates clearly why a city's old buildings, even such apparently unusable ones as an old generating station, are not always write-offs. In fact, as this project shows, they can become even more significant the second time around.'

The Powerhouse Museum project also won the 1988 Sulman Award for Architectural Merit.

The original power station buildings are a good example of Federation period industrial architecture.

The Powerhouse Museum has become a key player in the New South Wales' museum scene. It has an important and well-presented permanent display that uses the layout and structure of the former power station to great effect. It has also mounted many important temporary exhibitions. It is the largest museum in Australia with a collection of 385,000 objects, 22 permanent and five temporary display spaces, and more than 250 interactive exhibits.

The Powerhouse Museum is held in high esteem and has high social significance to a number of generations of parents and their children who have attended the institution and many of whom have registered strong objections to the possibility of its closure and redevelopment for other purposes.

DESCRIPTION:

The Powerhouse Museum is housed in the old power station that has been converted with great skill. The spacious forecourt welcomes visitors, who then enter through a new section

added on the Harris Street frontage, between the street and the old buildings. The new section is steel and glass with curved metal roofs, the eastern wing being much higher to cater for particularly high exhibits. The front of this higher section is all glass, allowing a very light, airy feeling inside, and the roof of the high but narrow building is semicircular. On the other hand, the western section containing the entry foyer on its ground floor is fronted with colourful cladding (once bright yellow, now white) above the actual entry doors that give access from the forecourt, and has a quadrant-shaped roof profile. The two new sections are joined by glass-fronted bridges on the first and second floor levels.

On the other hand, the much larger sections to the east of this modern addition retain the external forms of the power station in original condition. There are two large generating halls backing onto William Henry Street and adjoining the high new hall's northern section. Although utilitarian in general feel and appearance, there are still some decorative touches to the mid-brown brick walls, such as both arched and rectangular window openings, half columns, and a stepped pattern beneath the eaves on each end. South of the western one of this pair, there is a lower, three-story building that has a rather more ornate exterior and many more windows. Walls are brown brick with yellow cement window ledges, cornice and other features. One bay on the eastern wall has a triangular pediment, another a segmented arch. Other columns not associated with these higher bays that have pediments extend slightly above the top of the wall. Pediments, window ledges and the cornice all have decorative brackets, and the rectangular windows are topped with pseudo-keystones in "flat arches". The ground floor extends further to the east than do the upper floors, and there is a flat terrace above this extension.

The interior has flexible and high-quality display spaces that are exciting and varied. The design of these interior spaces complements and enriches the inherited architectural spaces. The use of form, colour, shape, pattern and texture was complimented by the jury for the 1988 Architecture Australia awards.

Former tramsheds to the south are also part of the Museum complex.

The Powerhouse Museum is the major branch of the *Museum of Applied Arts & Sciences* in Sydney, the other being the historic Sydney Observatory. Although often described as a science museum, the Powerhouse has a diverse collection encompassing all sorts of technology including Decorative Arts, Science, Communication, Transport, Costume, Furniture, Media, Computer technology, Space technology and Steam engines.

It has existed in various guises for over 125 years, and is home to some 385,000 artefacts, many of which are displayed or housed at the site it has occupied since 1988, and for which it is named — a converted electric tram power station in the Inner West suburb of Ultimo, originally constructed in 1902.

The Powerhouse Museum houses a number of unique exhibits including the oldest operational rotative steam engine in the world, the Whitbread Engine. Dating from 1785, it is one of only a handful remaining that were built by Boulton and Watt and it was acquired from Whitbread's London Brewery in 1888. This engine was named a Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers in 1986.

Another important exhibit is Locomotive No. 1, the first steam locomotive to haul a passenger train in New South Wales, built by Robert Stephenson in 1854. The most popular exhibit is arguably "The Strasburg Clock Model", built in 1887 by a 25-year old Sydney watchmaker named Richard Smith. It is a working model of the famous Strasbourg astronomical clock in Strasbourg Cathedral (which at that time was called Strassburg or Strasburg). Smith had never actually seen the original when he built it but worked from a pamphlet which described its timekeeping and astronomical functions.

Ninety five percent of the Powerhouse Museum's collection is maintained in storage at any one time. Sixty percent of this was moved from late 2004 to a new three hectare site in the northwestern Sydney suburb of Castle Hill. Built at a cost of A\$12 million, this facility consists of seven huge sheds, including one the size of an aircraft hangar, within which are housed such recently rediscovered artifacts as a section of the mast of HMS *Victory*, Nelson's flagship at the Battle of Trafalgar, and the spare wheel from *Bluebird*, the car Donald Campbell drove to break the world land speed record on Lake Eyre in the 1960s. The **Powerhouse Discovery Centre** at Castle Hill opened to the general public on 10 March 2006.

The museum hosts a number of permanent exhibitions including:

Cyberworlds: computers and connections

This exhibition is about computers and connections through them, and looks at the very first computing machines to the latest designs at the time of launch.

The Steam Revolution

This exhibition is remarkable in that nearly all of the engines on display are fully operational and are regularly demonstrated working on steam power. Together with the Boulton and Watt engine, and the Museum's locomotives, steam truck and traction engines, they are a unique working collection tracing the development of steam power from the 1770s to the 1930s. Engines on display include an 1830s Maudslay engine, a Ransom and Jeffries agricultural engine and the Broken Hill Fire Brigade's horse-drawn pump-engine. The museum owns a collection of mechanical musical instruments, of which the fairground barrel organ is located in the steam exhibition, where it is powered by a small fairground engine.

Experimentations

This science exhibition is very popular with children because of the many interactive displays demonstrating aspects of magnetism, light, electricity, motion and the senses. These include a machine that explains how chocolate is made and lets one taste four 'stages' of chocolate. There is a full-sized model of the front of a firetruck that measures the pedal-power used to sound its horn and lights, and a hand-powered model railway using a magnetic system to provide electric current to the track. One of the most popular features is a plasma ball that shows the electric current through the glowing gas inside it, and changes when touched.

Transport

This exhibition looks at transport through the ages, from horse-drawn carts through steam engines, cars and planes to the latest hybrid technology. On display is Steam Locomotive No. 1243, which served for 87 years, oldest contractor built locomotive in Australia. It stands beside a mock-up of a railway platform, on the other side of which is the Governor of New South Wales' railway carriage, of the 1880s. Also in this exhibition is the original Central Railway Station destination board, relocated to the museum in the 1980s when the station was refurbished.

Powerhouse Museum restored the locomotives 3830, restored to operational order in 1997 and 3265, restored in 2009 after 40 years off the rails. Sydney's last Hansom Cab was donated to the Museum by its driver, who left it at the gates of the Harris Street building. There is also a horse-drawn bus and collection of motorbikes.

Suspended aeroplanes, which can be better viewed from balconies, include the Catalina that Sir Patrick Gordon Taylor flew on the first flight from Australia to South America and in which he brought home 29 soldiers from New Guinea in 1945. There is also a Queenair Scout, the first Flying Doctor Service plane. Among the cars is a 1913 Sheffield Simplex, one of only 8 in the world. A four-minute film shows old footage of public transport.

The Powerhouse Museum also has Sydney trams C11 (1898), O805 (1909), R1738 (1938. 1st of its type), steam tram motor 28A, hearse car 27s and Manly horse car 292.

EcoLogic: Creating a sustainable future

This exhibition focuses on the challenges facing the environment, human impact, and ways and technologies to stop this effect. There is a house setup called Ecohouse where people toggle light variables to see the outcome as well as other energy use simulators and a 'ecological footprint' game. The exhibition includes a section of a tree with a time line marked on its rings, dating back to the 17th century.

HISTORY:

The Ultimo Power Station was originally built to supply electric power for Sydney's electric tram system. It was the first major power station in Sydney itself, and was commissioned in 1899. It was decommissioned in 1963 following the closure of the city's tramways network in 1961.

The Powerhouse Museum's origins date to 1879, when the Sydney International Exhibition was held in the Garden Palace, a purpose-built exhibition building located in the grounds of the Royal Botanic Gardens. At the conclusion of the Exhibition the Australian Museum (Sydney's museum of natural history) appointed a committee to select the best exhibits, with the intention of exhibiting them permanently in a new museum to be sited within the Garden Palace.

The new museum was to be called *The Technological, Industrial and Sanitary Museum of New South Wales*, and its purpose was to exhibit the latest industrial, construction and design innovations, with the intention of showing how improvements in the living standards and health of the population might be brought about.

Unfortunately, in September 1882 before the new museum could be opened a fire completely destroyed the Garden Palace, leaving the museum's first curator, Joseph Henry Maiden with a collection consisting of only the most durable artefacts including a Ceylonese statue of an elephant carved in graphite that had miraculously survived the blaze despite a 5-storey plunge.

Undaunted, Maiden commenced rebuilding the collection, but for the subsequent decade the new museum found itself housed in a large tin shed in the Domain — a facility it shared with the Sydney Hospital morgue. The ever-present stench of decaying corpses was not the best advertisement for an institution dedicated to the promotion of sanitation, and eventually, after intense lobbying the museum was relocated to a three-storey building in Harris Street, Ultimo, and simultaneously given a new name — *the Technological Museum*.

The new location placed the museum adjacent to the Sydney Technical College, and as such it was intended to provide material inspiration to the students. As time passed, its name was changed to *The Museum of Applied Arts and Sciences* and it also established branches in some of New South Wales' main industrial and mining centres, including Broken Hill, Albury, Newcastle and Maitland. It also quickly outgrew the main Harris Street site and by 1978 the situation had become dire, with many exhibits literally stuffed into its attic, and left unexhibited for decades.

On August 23 of that year, New South Wales Premier Neville Wran announced that the decrepit Ultimo Power Station, several hundred metres north of the Harris Street site had

been earmarked as the museum's new permanent home. The Museum spent an interim period exhibiting as the *Powerhouse Museum - Stage One* in the nearby tram sheds before re-opening as the *Powerhouse Museum* at the new site on March 10, 1988. The main museum building contains five levels, three courtyards and a cafeteria, as well as some offices. Workshops, library, storage and additional office space is located in the annexed tram sheds (still known in-house as "Stage One") - however the size and continually expanding nature of the museum's collection means that offsite storage facilities are also maintained.

Following its closure as a working observatory in 1982, Sydney Observatory was incorporated into the Powerhouse Museum.

BIBLIOGRAPHY:

Architecture Australia Awards 1988 *Award Winning Architecture: The 1988 RAI Awards*.

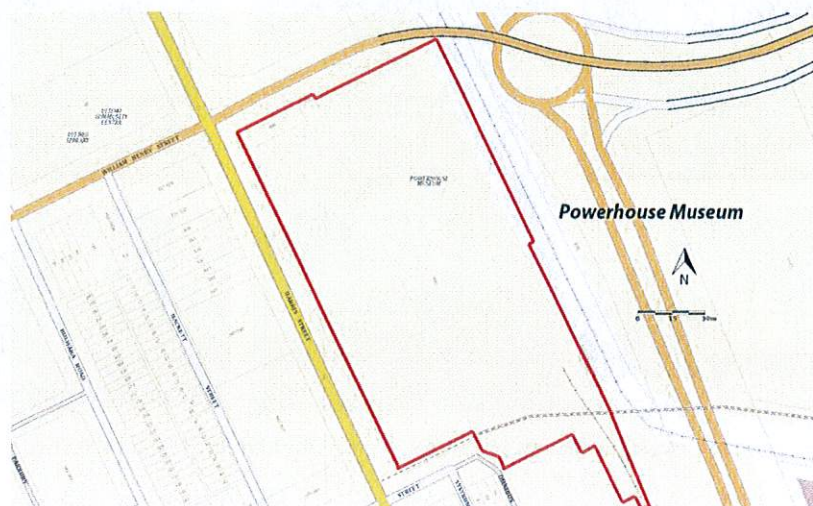
History of the Powerhouse Museum, Wikipedia,
https://en.wikipedia.org/wiki/History_of_the_Powerhouse_Museum

State Heritage Inventory

BOUNDARY OF LISTING

The boundary of the listing is the boundary of Lots 1 & 3 DP 631345, Lot 1 DP 781732, Lot 1 DP 770031 & Lot 1 DP 801428 as indicated by the red line on the following Site Plan.

SITE PLAN:





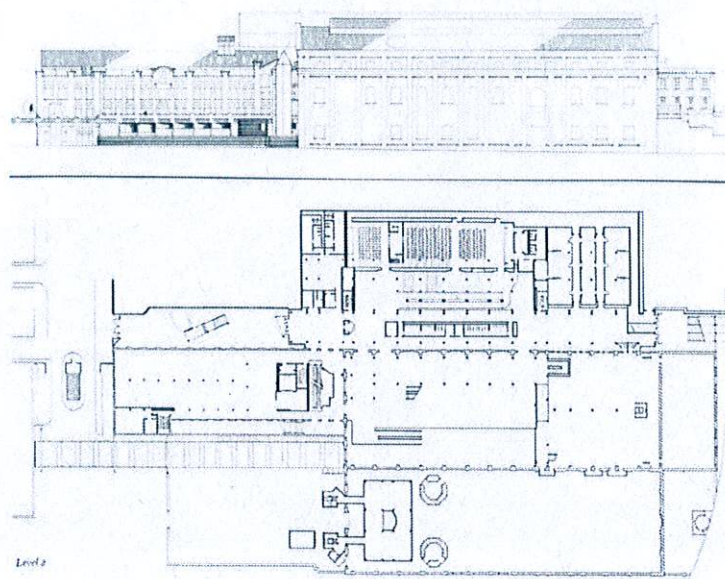
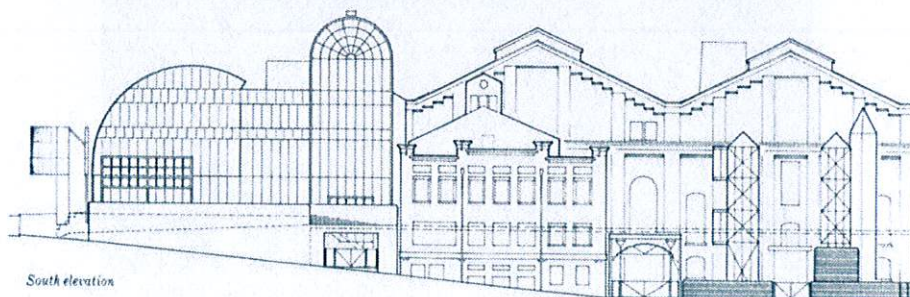
PHOTOGRAPHS:



Various views of the Powerhouse Museum, Image: Architecture Australia Awards 1988

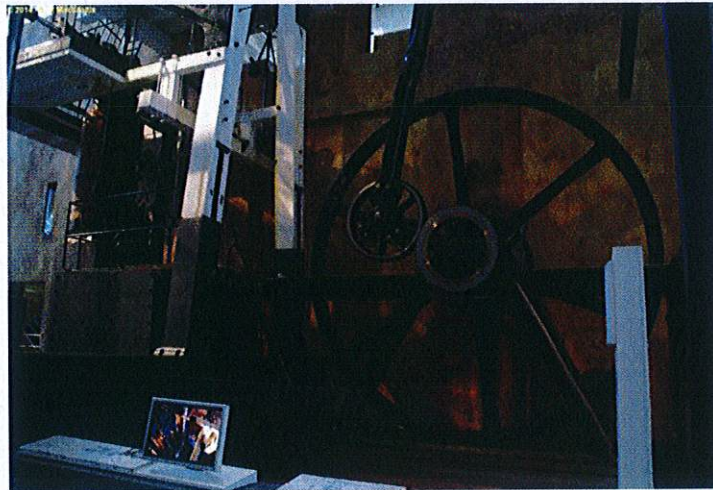


Powerhouse Museum during construction, Image Architecture Australia Awards 1988

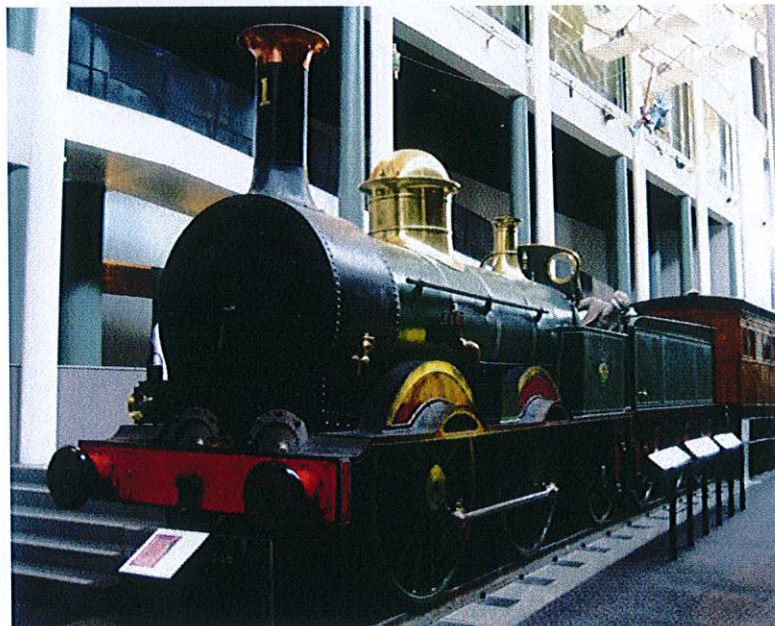




Medal, 'Sulman Award for Architectural Merit', awarded to John Thompson for design of the Powerhouse Museum by the New South Wales chapter of the Royal Australian Institute of Architects, Australia, 1988



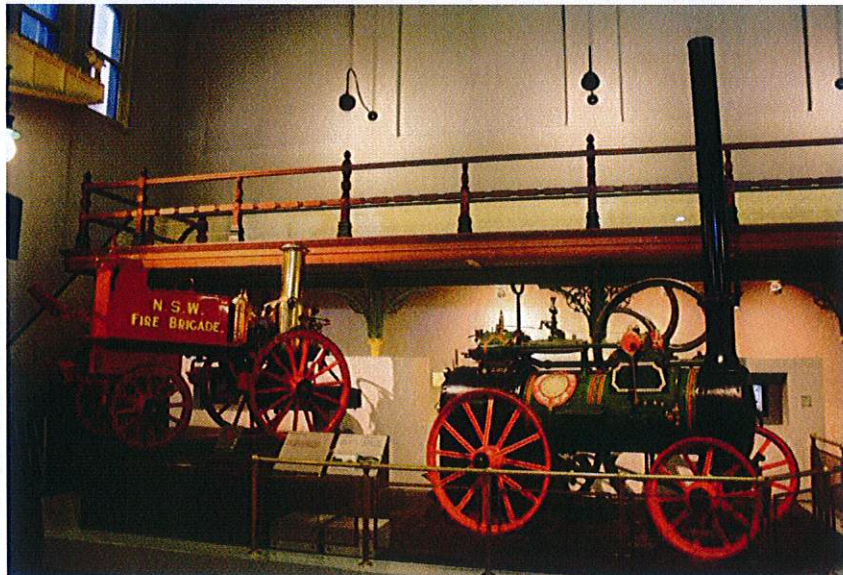
Boulton & Watt steam engine built in 1785 and decommissioned in 1887 – Powerhouse Museum - 14/10/2014, Image: David Maciulaitis



Locomotive No 1, the first steam locomotive to haul a passenger train in New South Wales, built by Robert Stephenson in 1854. Image: Australian Steam



The Strasburg Clock Model returning to the Powerhouse Museum after three year restoration by Keith Potter (pictured) Image: Sydney Morning Herald



Powerhouse Museum historic fire trucks, Image: sydney-city.blogspot



Powerhouse Museum Steam Engine 1243, Image: Time Out, Sydney

