FORMER CABLE TRAM ENGINE HOUSE & TRAM SUBSTATION

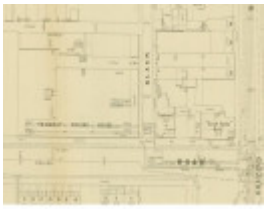
Brunswick cable tram engine house substation entrance

Brunswick cable tram engine house

Brunswick cable tram engine house - substation

Brunswick cable tram engine house 261-63 Brunswick Road

Brunswick cable tram engine house Black St facade



Brunswick MMBW plan 1904.JPG

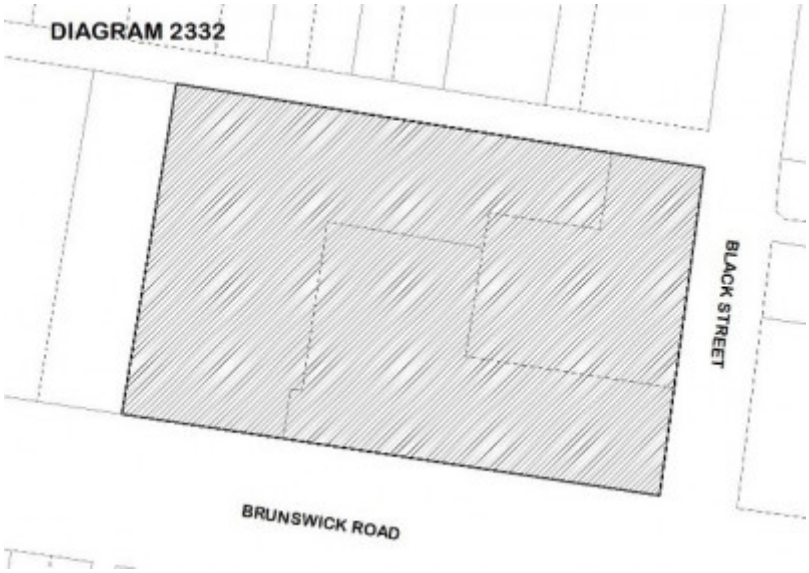


Diagram 2332

Location

253-263 BRUNSWICK ROAD BRUNSWICK, MORELAND CITY

Municipality

MERRI-BEK CITY

Level of significance

Registered

Victorian Heritage Register (VHR) Number

H2332

Heritage Overlay Numbers

HO41

VHR Registration

December 12, 2013

Amendment to Registration

August 13, 2020

Heritage Listing

Victorian Heritage Register

Statement of Significance

Last updated on - April 7, 2021

WHAT IS SIGNIFICANT?

The Former Cable Tram Engine House and Tram Substation including the 1887 Cable Tram Engine House on the corner of Brunswick Road and Black Street and the 1925 Tram Substation on Black Street at Brunswick (exteriors and interiors), subsurface elements and all original rectification and associated equipment.

HOW IS IT SIGNIFICANT?

The Former Cable Tram Engine House and Tram Substation is of historical and archaeological significance to the State of Victoria. It satisfies the following criterion for inclusion in the Victorian Heritage Register:

Criterion A

Importance to the course, or pattern, of Victoria?s cultural history.

Criterion B

Possession of uncommon, rare or endangered aspects of Victoria?s cultural history.

Criterion C

Potential to yield information that will contribute to an understanding of Victoria?s cultural history.

Criterion D

Importance in demonstrating the principal characteristics of a class of cultural places and objects.

WHY IS IT SIGNIFICANT?

The Former Brunswick Cable Tram Engine House and Tram Substation is significant at the State level for the following reasons:

The Former Cable Tram Engine House and Tram Substation is historically significant for its association with the development of Melbourne's transport system in the nineteenth and early twentieth centuries. The building demonstrates two of the major stages in the development of Melbourne's tram system ? the cable tram system developed from the 1880s and the electric tram system which began to replace it from the 1920s. The cable tram system played an important role in the development of Melbourne and its suburbs and was one of the largest and most complex in the world. The 1925 substation and its rotary converter rectification equipment were installed within the former engine house, rather than in a new free-standing building. The substation and remnant rectification equipment are associated with the electrification of the old cable tram routes from the 1920s, and the supply of power to more than one tram route. (Criterion A)

The Former Cable Tram Engine House and Tram Substation is a rare and relatively intact surviving element of Melbourne's cable tram system, which began to be converted to electric power in the early twentieth century. It one of the few examples of the adaption of part of an existing engine house for use as an electrical substation, thereby demonstrating two major stages in the development of Melbourne's tram system. It is one of only two substations in Victoria to retain original rotary converter equipment. (Criterion B)

The Former Cable Tram Engine House and Tram Substation is significant for its potential to contain significant nineteenth century archaeological remains and artefacts relating to the cable tram system, including deep brick-lined pits and cable races (tunnels) that span the length of the building. Remains of an underground tank and bath, and footings of the chimney stack and weigh bridge may still exist under the more recent buildings on the west and north of the site. Early underground cables carrying DC power between the substation and Brunswick Road and Sydney Road may also remain. (Criterion C)

The Former Cable Tram Engine House and Tram Substation is significant as a notable example of the engine houses constructed by the Melbourne Tramways Trust from the 1880s to power Melbourne's cable trams. It is largely intact and features most of the external principal architectural characteristics of a cable tram engine house including a wide doorway to allow large items of steam driven machinery to be moved in and out, high ceiling, a bluestone plinth and brick walls with polychrome decoration. Tram cables travelled from the Engine House to Sydney Road through underground brick races (tunnels) which are still present. The retention of some of the original rectification equipment and fixtures give an indication of the original function of the substation building. (Criterion D)

Permit Exemptions

General Exemptions:

General exemptions apply to all places and objects included in the Victorian Heritage Register (VHR). General exemptions have been designed to allow everyday activities, maintenance and changes to your property, which don’t harm its cultural heritage significance, to proceed without the need to obtain approvals under the Heritage Act 2017.

Places of worship: In some circumstances, you can alter a place of worship to accommodate religious practices without a permit, but you must notify the Executive Director of Heritage Victoria before you start the works or activities at least 20 business days before the works or activities are to commence.

Subdivision/consolidation: Permit exemptions exist for some subdivisions and consolidations. If the subdivision or consolidation is in accordance with a planning permit granted under Part 4 of the *Planning and Environment Act 1987* and the application for the planning permit was referred to the Executive Director of Heritage Victoria as a determining referral authority, a permit is not required.

Specific exemptions may also apply to your registered place or object. If applicable, these are listed below. Specific exemptions are tailored to the conservation and management needs of an individual registered place or object and set out works and activities that are exempt from the requirements of a permit. Specific exemptions prevail if they conflict with general exemptions.

Find out more about heritage permit exemptions here.

Specific Exemptions:

It should be noted that Permit Exemptions can be granted at the time of registration (under s.38 of the Heritage Act). Permit Exemptions can also be applied for and granted after registration (under s.92 of the Heritage Act).

Under s.38 of the Heritage Act 2017 the Executive Director may include in his recommendation categories of works or activities which may be carried out in relation to the place or object without the need for a permit under Part 5 of the Act. The Executive Director must not make a recommendation for any categories of works or activities if he considers that the works or activities may harm the cultural heritage significance of the place or object.

The following permit exemptions are not considered to cause harm to the cultural heritage significance of the Former Cable Tram Engine House and Tram Substation.

General Conditions

- All exempted alterations are to be planned and carried out in a manner which prevents damage to the fabric of the registered place or object.
- Should it become apparent during further inspection or the carrying out of works that original or previously hidden or inaccessible details of the place or object are revealed which relate to the significance of the place or object, then the exemption covering such works shall cease and Heritage Victoria shall be notified as soon as possible.
- All works should ideally be informed by a Conservation Management Plan prepared for the place. The Executive Director is not bound by any Conservation Management Plan, and permits still must be obtained for works suggested in any Conservation Management Plan.
- Nothing in this determination prevents the Heritage Council from amending or rescinding all or any of the permit exemptions.
- Nothing in this determination exempts owners or their agents from the responsibility to seek relevant planning or building permits from the relevant responsible authority, where applicable.

Specific Permit Exemptions
General
Minor repairs and maintenance which replaces like with like.

- Repairs and maintenance must maximise protection and retention of fabric and include the conservation of existing details or elements. Any repairs and maintenance must not exacerbate the decay of fabric due to chemical incompatibility of new materials, obscure fabric or limit access to such fabric for future maintenance.
- Works or activities, including emergency stabilisation, necessary to secure safety in an emergency where a structure or part of a structure has been irreparably damaged or destabilised and poses a safety risk to its users or the public. Note: The Executive Director, Heritage Victoria, must be notified within seven days of the commencement of these works or activities.
- Repair to or removal of non-original items such as air conditioners, antennae and aerials and associated pipe work, ducting and wiring.
- Maintenance and replacement of existing contemporary fire services of the same size and in the same location.
- Maintenance to the currently operational electrical equipment including the silicon diode rectification equipment .
- Painting of previously painted external and internal surfaces in the same colour, finish and product type provided that preparation does not remove all evidence of earlier paint finishes or schemes. Note: This

exemption does not apply to areas where there are specialist paint techniques such as sign-writing or oiled or varnished surfaces.
- Cleaning including the removal of surface deposits or graffiti by the use of low-pressure water (less than 300 psi at the surface being cleaned) and neutral detergents and mild brushing and scrubbing with plastic not wire brushes.

Specific Permit Exemptions
Safety and Security
• The erection of temporary security fencing, scaffolding, hoardings or surveillance systems not attached to the building or objects integral to prevent unauthorised access or secure public safety.

Interiors

- Works to maintain existing bathrooms and kitchens.
- Removal or replacement of window furnishings, carpets and/or flexible floor coverings light fixtures and the like.
- Installation, removal or replacement of electrical wiring. Earlier wiring should be retained in situ. If earlier wiring is currently exposed, it should remain exposed. If it is fully concealed it should remain fully concealed.
- Removal or replacement of smoke and fire detectors, alarms and the like, of the same size and in existing locations.
- Removal or replacement of electric clocks, public address systems, emergency lights, exit signs, luminaires and the like

Interiors of 261-263 Brunswick Road:

- All interior works above floor level to the shop next to the original engine house building on Brunswick Road and the offices and warehouse at the rear of the engine house building and substation. Works must not impact potential archaeological evidence below floor level, the ceilings or alter the external structure of the buildings.

Landscape

- Weed control in carpark area.

Theme

3. Connecting Victorians by transport and communications 6. Building towns cities and the garden state

Construction dates	1887, 1936, 1925,
Heritage Act Categories	Registered place, Registered archaeological place, Registered object integral to a registered place,
Hermes Number	2155
Property Number	

History

The 1883 Melbourne Tramway & Omnibus Co. Act established the Melbourne Tramways Trust (MTT), comprising the representatives of the various municipalities. The MTT built cable lines and engine houses between 1884 and 1891 and remained owner of the lines and installations until its dissolution in June 1916. A separate company (Melbourne Tramway & Omnibus Co. Ltd.) leased and operated the system. Their successors were the Melbourne Tramway Board (c.1916-1918) and then the Melbourne and Metropolitan Tramways Board (M&MTB) from 1918. When complete, there were seventeen routes on the cable tram network. The engine houses were located near the midpoint of a route and the depots at the terminus. In 1887 the Cable Tram Engine

House was built in Brunswick Road and a tram depot was constructed in Sydney Road. The preferred site for the Engine House was slightly further south on the north east corner of Park Street, but land prices at the time forced the Trust to purchase the present-day site. The Brunswick Cable Tram Engine House was often known as the Sarah Sands Engine House as it was near the rear of a well-known hotel of the same name. The Sydney Road tram route was the sixth cable tram route opened by the MTT. It began operation in October 1887 following the route of the previous omnibus service. This service was the longest cable on the cable tram system, extending from the Brunswick Road Engine House to Flinders Street station and return, a distance of about 9.6 km. The cable trams were powered by steam driven machinery in the Engine House. Melbourne's cable tram routes were progressively electrified from the 1920s, following the formation of the M&MTB. Its aim was to integrate, electrify and extend the existing cable and electric tram routes in Melbourne. In the 1920s the M&MTB built brick substations in the inner suburbs where the high voltage alternating current (AC) obtained from the State Electricity Commission (SEC) was converted to direct current (DC) at a lower voltage to power the new electric trams. In 1924 one 500 kW rotary converter was installed at the Brunswick Road Cable Tram Engine House. In 1925 a new substation was installed in the northern part of the Engine House with an entrance at 1 Black Street. The first rotary converter and a second 500 kW rotary converter were installed in the new substation at this time. From 1925 to 1936 the rotary converters in the substation supplied DC power to the West Coburg tramway and the steam powered engines in the engine house continued to power the Sydney Road cable trams. Other cable tram engine houses ceased operating when the cable tram lines were converted to electricity, and most were adapted to other uses. But in the case of the Brunswick Road engine house, both cable and electric trams were powered from the same building for ten years. It is the only known engine house in Victoria which demonstrates the two major stages of the development of tram transport in Melbourne: cable and then electric traction. In 1936 the new Brunswick West Substation (VHR H2397) supplying the West Coburg tramway was completed. At the same time the Sydney Road trams were converted from cable to electrical operation using DC power supplied by the Brunswick Road substation. The long southern engine house section of the building at 253-263 Brunswick Road was then decommissioned. This section was later sold to private owners. KEY REFERENCES Allom Lovell and Associates, City of Moreland Heritage Review, April 1998 (Revised January 1999) - Building Citations Datasheets A-K (Volume 2, Part 1) , online at https://www.moreland.vic.gov.au/globalassets/areas/heritagelib-7504/moreland-heritage-review-buildingcitations-volume-2--part-1--datasheets-a--k.pdf Jones, Russell, Melbourne Tram Museum , From Rotary Converters to solid-state: tramway substation architecture in Melbourne, 2013; online at http://www.hawthorntramdepot.org.au/papers/substations.htm Melbourne and Metropolitan Board of Works, Town of Brunswick, Detail Plan No. 1885. http://handle.slv.vic.gov.au/10381/125831 Melbourne and Metropolitan Tramway Board, Report and statement of Accounts, 1924. Melbourne and Metropolitan Tramway Board, 1975, Project 3-74, Replacement of Substation Equipment, (unpublished) Personal communications from: Miles Pierce and Owen Peake, Electrical Engineers, Engineering Heritage Victoria; Warren Doubleday and Russell Jones, Melbourne Tram Museum and Robert Green Vines, Gary, Melbourne Metropolitan Tramway Heritage Study, Report for Heritage Victoria. 2011, online at https://www.heritage.vic.gov.au/__data/assets/pdf_file/0024/61449/Tram-Historyfinal_reduced__Chapter6_Part2.pdf

Plaque Citation

This was built in 1887 as an engine house to power the cable tram line along Sydney Road. When the line was converted to electric traction in 1936 part of the building became a substation, providing the trams with electric current.

Assessment Against Criteria

Criterion
The Former Brunswick Cable Tram Engine House and Tram Substation is of historical, architectural and archaeological significance to the State of Victoria. It satisfies the following criterion for inclusion in the Victorian Heritage Register:

Criterion A Importance to the course, or pattern, of Victoria's cultural history Criterion B Possession of uncommon, rare or endangered aspects of Victoria's cultural history Criterion C Potential to yield information that will contribute to an understanding of Victoria's cultural history Criterion D Importance in demonstrating the principal characteristics of a class of cultural places and objects

The Former Brunswick Cable Tram Engine House and Tram Substation is significant at the State level for the following reasons:

The Former Brunswick Cable Tram Engine House, with its Tram Substation, is historically significant for its association with the development of Melbourne's transport system in the nineteenth and early twentieth centuries. The building demonstrates two of the major stages in the development of Melbourne's tram system: the cable tram system developed from the 1880s and the electric tram system which replaced it from the 1920s. The cable tram system played an important role in the development of Melbourne and its suburbs and was one of the largest and most complex in the world. The substation is associated with the electrification of the old cable tram routes from the 1920s. Its installation within the former engine house, rather than in a new free-standing building, is a reflection of the financial constraints imposed by the 1930s Depression, during which the Brunswick line was electrified. (

Criterion A)
The Former Brunswick Cable Tram Engine House is a rare and relatively intact surviving element of Melbourne's cable tram system, which was converted to electric power in the early twentieth century. It is the only example of the reuse of an existing engine house adapted for use as an electrical substation, thereby demonstrating two major stages in the development of Melbourne's tram system. (

Criterion B)
The Former Brunswick Cable Tram Engine House is archaeologically significant for its potential to contain significant nineteenth century archaeological remains relating to the cable tram system. (

Criterion C)
The Former Brunswick Cable Tram Engine House is architecturally significant as a largely intact example of the engine houses constructed by the Melbourne Tramways Trust from the 1880s to power Melbourne's cable trams. Those in more prominent locations tended to be grand architect-designed structures designed to impress, but this one, in a less visible location, is an architecturally more modest example of its kind. (
Criterion D)

Extent of Registration

Heritage Act 2017 NOTICE OF REGISTRATION As Executive Director for the purpose of the Heritage Act 2017, I give notice under section 53 that the Victorian Heritage Register is amended by modifying a place in the Heritage Register: Number: H2332 Category: Registered Place, Registered Objects Integral to a Registered Place Place: Former Cable Tram Engine House & Tram Substation Location: 253-263 Brunswick Road, Brunswick Municipality: City of Moreland All of the place shown hatched on Diagram 2332 encompassing all of Lots 1 and 2 on Plan of Subdivision 346478 and all of Lot 2 on Lodged Plan 45051 and all of the fixed and non-fixed objects integral to the place listed in the inventory dated January 2020, held by the Executive Director, Heritage Victoria. 13 August 2020 STEVEN AVERY Executive Director