

## APPENDIX A: ITEM DESCRIPTION TEMPLATE

Use this Template for listing as either an Item of Engineering Interest or for a Proposal to Nominate for an EHRP Marker.

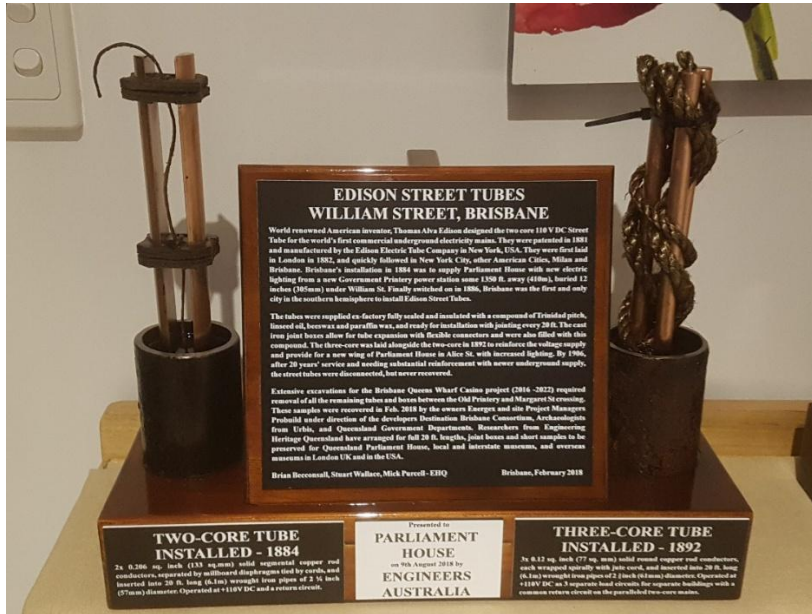
<b>Proposed EHRP Category</b>	Item of Engineering Interest		
<b>Item Name:</b>	Edison Tubes- William St Brisbane		
<b>Other/Former Names:</b>	nil		
<b>Locality:</b>	Brisbane		
<b>Address:</b>	William St		
<b>Co-ordinates</b>	-27.474498254627655, 153.02582802829275		
<b>Current Owner:</b>	Qld State Govt		
<b>Original Owner:</b>	Qld State Govt		
<b>Current use:</b>	Out of use since 1906		
<b>Former use:</b>	Supply first electricity supply to QLD parliament house in 1886		
<b>Proposed use:</b>	Aprox.80m remaining under William st abandoned-exact location yet to be determined-no further use		
<b>Item Condition:</b>	Reasonable		
<b>Designer:</b>	Thomas Edison, USA		
<b>Builder:</b>	ECG Barton		
<b>Started:</b>	1884	<b>Completed:</b>	1886
<b>History: (100 to 600 words)</b>	These underground mains called Edison Street Tubes were invented in 1881 by Thomas Edison in the USA, and first used in London, England as a trial in early 1882 and in New York, USA in late 1882 for the world's first central steam power station and distribution system. They were used in Brisbane to connect the Government Printing Office power station to new electric incandescent lighting in Parliament House in 1886. This was the first and only place in the southern hemisphere to use these mains. Reinforced in 1892, but superseded and abandoned in 1906, they were		

	rediscovered and partially recovered in 1992
<b>Description: (100 to 600 words):</b>	The Street Tubes were each 20 feet in length (6.1m) with conductor sizes of 2x 0.206 sq. inch (133sq mm) for the two-core and 3x 0.12 sq. inch (77 sq mm) for the three-core. They consist of solid copper rods insulated by millboard diaphragms tied by cords in the case of the two-core and twisted rope in the three-core and slid into the 20 ft long wrought iron tubes of outer diameter 2 ¼ inch (57mm) for two-core and 2 3/8 inch (61mm) for three-core (See Figure 1.) After filling by vacuum pump with insulating compound made from a combination of refined Trinidad pitch, linseed oil, beeswax and paraffin wax, they were permanently sealed with rubber plugs at each end for transport, with 3 inches (75mm) of copper rod protruding to enable continuous connections. Following installation in the trench, they were joined by cast iron bolted egg shaped “boxes” filled with the same insulation and with flexible connectors to allow for expansion. (See figure 2.) The trenches were only 300mm deep under the roadway, with the two mains running parallel to each other and well away from any other underground services.
<b>Engineering Significance:</b>	The Edison Street Tubes were patented in 1881 for the two-core design by Thomas Edison as the first commercial underground electric mains in the world and were manufactured in New York, USA by one of his companies, Edison Electric Tube Company
<b>Webpage Summary: (200 to 300 words)</b>	Edison Street Tubes – First and only use in Australia to supply DC power to Queensland parliament House in 1886 for lighting, commissioned by the father of the Queensland electricity Supply Network, Edward G C Barton.
<b>Engineering Theme:</b>	Electricity
<b>Heritage Listing:</b>	<i>Indicate whether the item is formally heritage-listed by a State and/or Local Authority</i>
<b>References</b>	<a href="https://documents.parliament.qld.gov.au/getinvolved/events/2018EdisonTubesPresentation.pdf">https://documents.parliament.qld.gov.au/getinvolved/events/2018EdisonTubesPresentation.pdf</a>

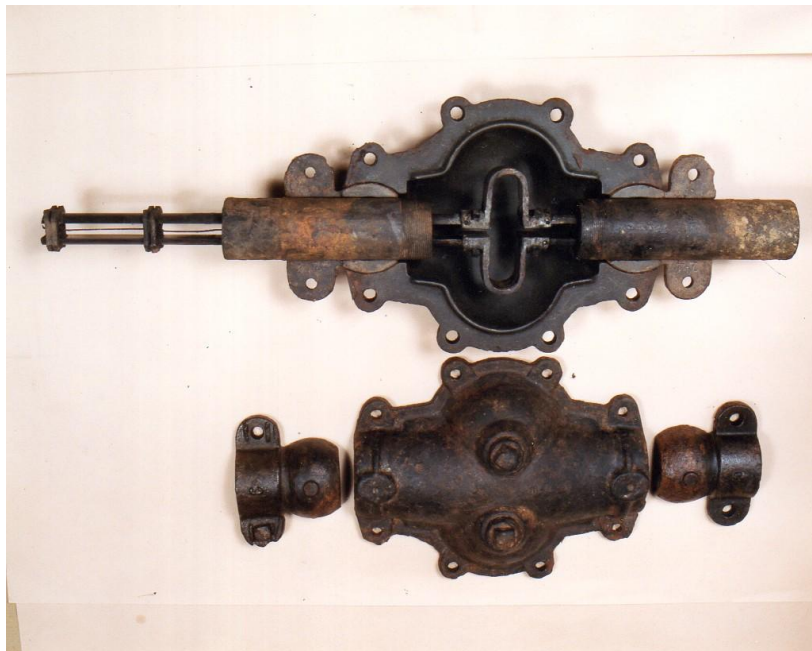
<b>Proposed by:</b>	Brian Becconsall & Stuart Wallace		
<b>Contact Phone &amp; Email:</b>	33785169	b.becconsallbigpond.com	
<b>EHA Branch Chair:</b>	Andrew Barnes	<b>Approval Date:</b>	Email 1/6/26

Photographs

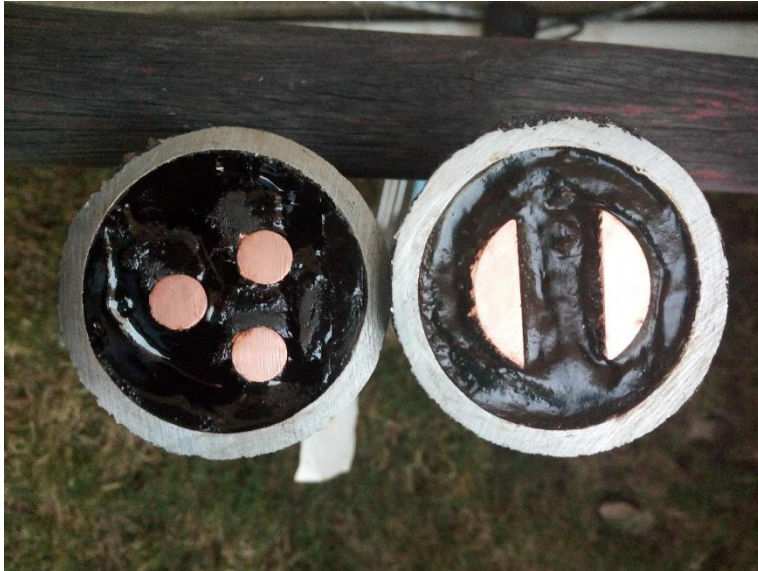
All supplied by EHQ



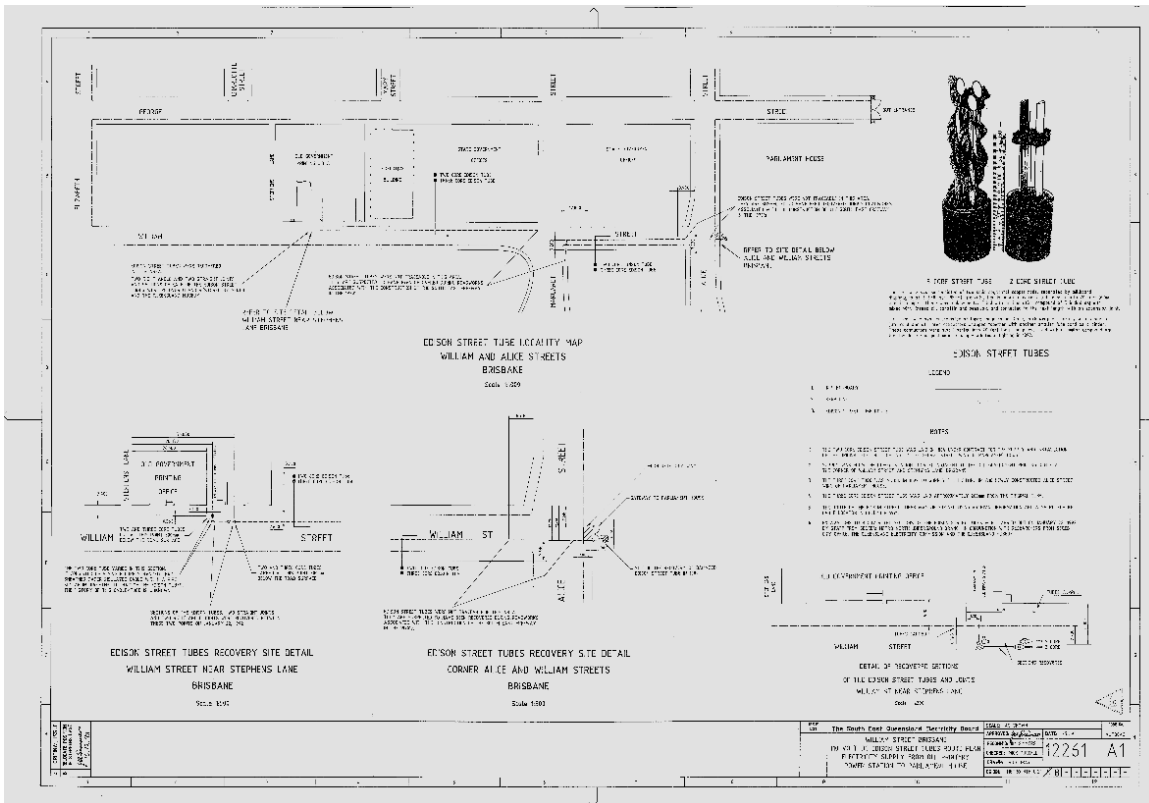
Edison Tubes William St, Brisbane- Bench top sample display



Details of cast iron 2 core joint box with pitch insulation removed



Cross section of 3 core and 2core tubes



Route plan of Tubes in William st



Map plan of recovery in 2018 to make way for the Queens Wharf Development project,

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