

Application Name: The Tower Subway**Number:** 474535**Type:** New**Heritage Category:** Listing**Address:**

Beneath the River Thames from the east side of Petty Wales, EC3, to a point beneath the 'More London' development on the north side of Tooley Street, SE1.

County	District	District Type	Parish
Greater London Authority	City and County of the City of London	London Borough	Non Civil Parish
Greater London Authority	Southwark	London Borough	Non Civil Parish
Greater London Authority	Tower Hamlets	London Borough	Non Civil Parish

Recommendation: Reject**Assessment****CONTEXT**

We have been asked to assess the Tower Subway tunnel, Southwark and Tower Hamlets, for listing. There is no known proposal to undertake works to the tunnel, but it is felt that clarity as to whether the tunnel meets the criteria for designation would be useful.

HISTORY AND DETAILS

The Tower Subway was constructed in 1869 and was the first tube tunnel dug using the Barlow-Greathead Shield. Named after the engineers Peter Barlow and James Henry Greathead, who collaborated on the tunnel, this shield was the forerunner of modern tunnelling shields. It was an improvement upon Marc Brunel's tunnelling shield, the first such shield, used to dig the Thames Tunnel between Wapping & Rotherhithe (now part of the London Overground network and listed Grade II*). Brunel's Thames Tunnel, built 1825-1843 was the first tunnel under the Thames, the second being the Tower Subway, which was the first underground tube railway; designed to take a narrow-gauge, cable-hauled railway powered by static steam engine. The earliest parts of London's underground railway network predate the Tower Subway (the Metropolitan Railway and the Hammersmith and City Railway opened in 1863 and 1864 respectively), but these were constructed using cut and cover methods, rather than underground tunnelling. It was only through Barlow and Greathead's development of a successful shield that tunnelling became a viable option, and the 1890 City and South London Railway (now part of the Northern Line and on which Greathead was also engaged as an engineer), was the first deep-level electric tube railway to form part of the network.

The construction of the Tower Subway was completed in less than a year, as opposed to the 18 years of Brunel's tunnel, but cable-hauled trains however were not a success, and within approximately eight months of its opening, the tunnel became a pedestrian-only foot tunnel, for which a toll was charged. With the opening of Tower Bridge in 1894 and its free crossing for pedestrians the subway fell out of use and was acquired by the London Hydraulic Power Company (LHPC) and closed to the public in 1898. It was used as a conduit for LHPC mains and also for water mains and subsequently for telecommunications cables.

The tunnel runs under the Thames from the east side of Petty Wales, (just west of the Tower of London) to a point beneath the 'More London' development on the north side of Tooley Street. It is c1240ft long with a diameter of only 7ft and is lined with circular cast-iron panels. The shafts which connect the tunnel with the surface are 10ft in diameter. The original portal buildings on the surface have both been lost: the southern access was replaced in the 1990s, and to the north end there is a cylindrical portal in a neo-classical style dating from the 1920s.

ASSESSMENT

The overarching considerations in assessing a structure for listing are those of special architectural or historic interest. As set out in English Heritage's Listing Selection Guide: Transport Buildings (April 2011), the C18 and C19 saw a transport revolution in Britain, with not only the construction of roads, but also canals, railways, and subsequently, in the case of London, the Underground system. Buildings and structures associated with the early phases of development of these systems will often merit serious consideration for designation, both for their rarity and engineering interest; relevant factors for consideration include: date, architectural quality, and historic and engineering interest.

Large numbers of transport-related tunnels of varying date and form do survive and in some cases are engineering triumphs of their time. Nevertheless, relatively few tunnels are designated. It tends to be visible architectural elements such as tunnel portals which are designated as well as, or instead of, the tunnel, as these can be of high architectural quality. There are notable exceptions, such as Brunel's Thames Tunnel which is not just a pioneering feat of engineering on an impressive scale, but has architectural quality, with tiled walls and stucco finishes. The Tower Subway does not meet the criteria for listing for the following principal reasons:

- * Architectural interest: the single surviving free-standing portal is of modest architectural interest and of relatively late date (1920s); below ground the tunnel is of small diameter, simply lined with cast iron plates, and consequently is not of special architectural interest;
- * Date: built in 1869 to carry a cable-hauled railway, it post-dates the first tunnel under the Thames by 25 years, and post-dates by 5 years the earliest lines of the underground (albeit these were built using cut and cover);
- * Engineering interest: it is in this way that the tunnel does have notable interest, lying historically and technologically between Marc Brunel's pioneering Thames Tunnel and the 1890 City and South London Railway; nevertheless, it is in the tunnelling shield itself, as a better-designed, more efficient tool than those which had gone before it, that the interest principally lies, rather than the fabric of the tunnel itself, which is considerably narrower, later, and physically less impressive than its predecessor, the Thames Tunnel.

Consideration has also been given to whether the Tower Subway should be designated as a Scheduled Monument – a discretionary designation which identifies structures of national importance, but which does not consider architectural interest as a criterion. However, as discussed above, the tunnel is not the first to be dug using a tunnelling shield, nor the first to run under the Thames, and it was not the first to carry trains underground: its construction illustrates the refinement of an important tunnelling tool that links Brunel's Thames Tunnel to the modern Underground network. Although this interest is to an extent manifest in the tunnel, it is the tool which was used to construct the tunnel which may be considered of national importance, rather than the tunnel itself - the fabric of which is not of sufficient importance to warrant scheduling, and the management regime which this imposes.

CONCLUSION

The Barlow-Greathead shield had a major impact on the viability of later parts of the London Underground network and the Tower Subway of 1869 was the project which demonstrated its success. However, the engineering interest lies principally in the tool rather than the structure, which is physically modest and therefore does not meet the criteria for listing at a national level, nor is scheduling appropriate.

