THE BIRTH OF THE TUBES

by Antony Badsey-Ellis

A report of the LURS meeting at All Souls Clubhouse on Tuesday 10 December 2019

Antony's latest book, co-written and edited by Jim Whiting, is also called "The Birth of the Tubes" and was published by Capital Transport in September 2019. He explained that tonight's talk would feature many pictures which are not in the first edition of the book.

This book is a non-technical history of the social side of the building of the Underground and how people were involved and how the railways were received at the time.

In the 1860s the Metropolitan and District Railways had used conventional steam locomotives going through cut and cover tunnels. The tube railways were a completely new system with electric locos running through deep level tunnels.

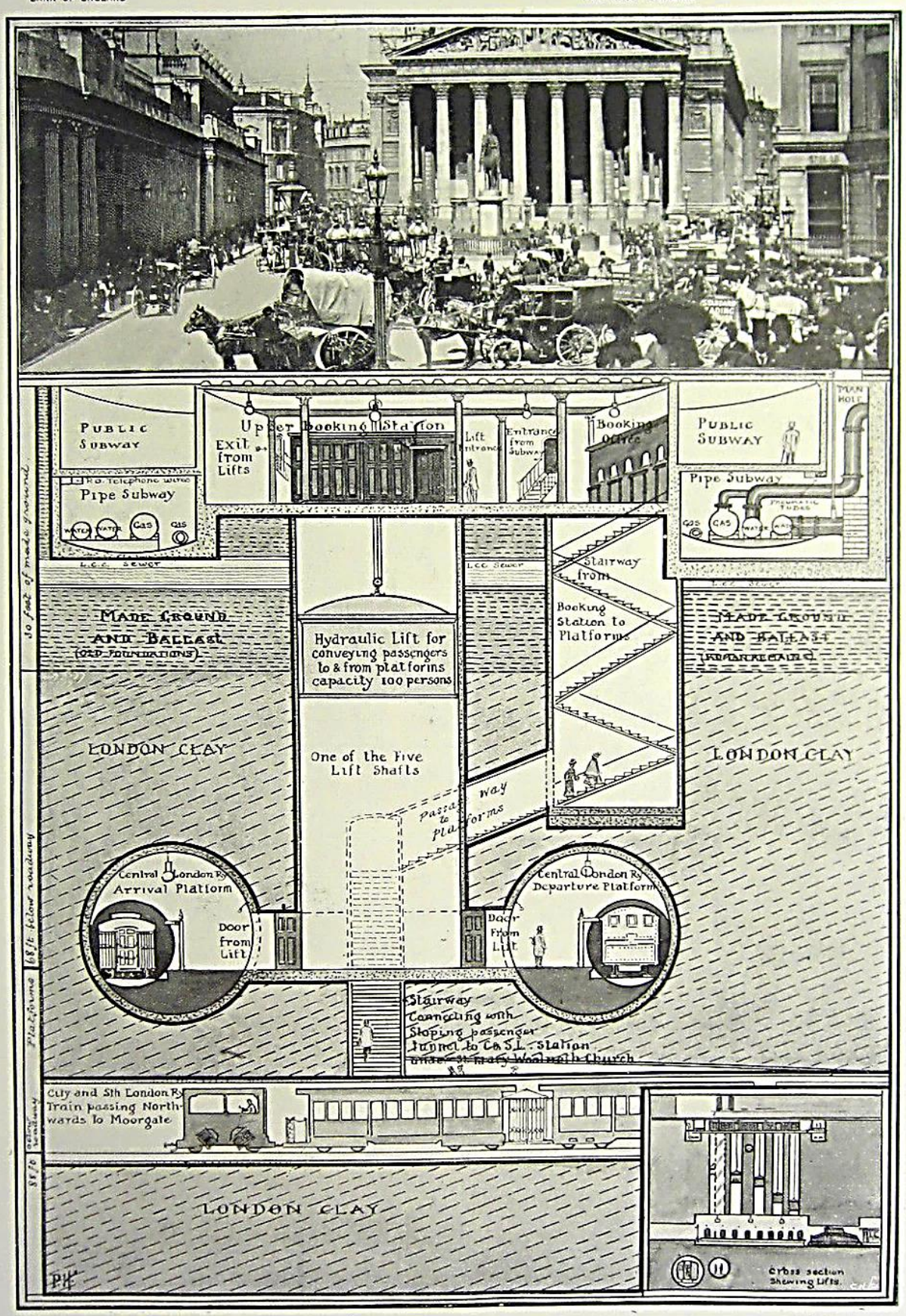
The first tube tunnel was not (as many people think) the City and South London Railway (C&SLR) but the Tower Subway from near the Tower of London to Tooley Street. This tunnel was about 7 feet in diameter and dug fully by hand, lit only by candles, and with very little Health & Safety as we would know it today. Each ring of the tunnel lining was in four parts (three large and a small key segment) weighing four hundredweight (203 kg) each which were man-handled into place and secured with bolts. The shield was then moved forward, about 18 inches at a time, by hand-cranked screw jacks. Spoil was removed via small trucks on a temporary railway and then lifted up the 60-foot-deep access shaft in small buckets using a steam crane.

In the 1890s the first tube railway (C&SLR) was again dug by hand but by this time James Greathead (him of the Tunnelling Shield) had invented a pneumatic machine which blew grout through holes in the tunnel lining into the space behind using compressed air. This greatly reduced the risk of subsidence above the tunnel. Instead of being pushed by hand, the spoil trucks were now pulled by ponies. Antony showed an image of a ticket to the official opening of the C&SLR which was to have taken place on Tuesday 4 November 1890. However, the railway was delayed by six weeks, so trains did not start running until the following month.

Next to be built was the Waterloo & City Railway in 1898. This was built from the middle of the Thames outwards to avoid having to purchase land, and to allow the spoil to be taken away directly by barge. It also made use of compressed air and airlocks to construct the section of tunnel beneath the District Railway at Blackfriars, which the DR had insisted upon during the Parliamentary approval process. This reduced the humidity of the air in the tunnel but did lead to condensation and water vapour. There was also a smaller airlock for equipment which permitted an almost instantaneous change in pressure as this did not need to go through the decompression chamber that the men required to avoid getting the "bends".

UNDERGROUND LONDON. *At the Busiest Crossing in the World.*

BANK OF ENGLAND THE ROYAL EXCHANGE



Designed by Percy Home.

The area represented by the picture at the top of this page is the busiest spot on earth. Bounded by the Mansion House, the Royal Exchange, and the Bank of England, it forms the meeting point of six streets (King William Street, Cornhill, Threadneedle Street, Princes Street, Cheapside, and Queen Victoria Street). It is now supported on a steel and concrete roof, scarcely two feet thick, beneath which a great underground traffic has been organised to the depth of eighty-eight feet. There are (1) the public subway, (2) the Central London Railway, and (3) the City and South London Railway

The Central London Railway (today's Central Line) first map shows the line running from Bank to Shepherd's Bush, but also featured the depot and generating station. On the other side of the map was a diagram of the subways at Bank Station which was as chaotic then as now!

The Bakerloo was originally to have run from Waterloo to Baker Street, but extensions authorized before opening lengthened it at both ends to Elephant & Castle in the south) and Great Central (aka: Marylebone, to the north-west), with a further extension to Paddington planned where the line would share a station with the District Line. This line was financed by the American financier Charles Yerkes. Antony showed an image of the original Baker Street station buildings taken just after opening in March 1906, which included the short-lived form of the name as "Baker-loo".

Nine months later in December 1906 the Great Northern, Piccadilly & Brompton Railway opened, also part of the Yerkes combine. Suggestions for a nickname included: Picaloo, Picton, Pic-a-Brum, Hammerdilly, PER (Piccadilly Electric Railway), and Presto-dilly.

Yerkes's third tube railway was the Hampstead Tube which, in 1897, had been drawn to run from Charing Cross to Tottenham Court Road then to Euston Road where it would split into two branches: one to Euston on to King's Cross, and the other straight up Hampstead Road to a station in the vicinity of the current Camden Road Station. In 1899 this plan had to be scrapped and a change in route was authorized. Instead the line would go only via Euston, from which it would curve north to Camden. This was because the route to King's Cross would have run directly under St. Pancras station and that station's owners refused to permit this for fear of damage to the station and its hotel.

In the early-1900s, many postcards were published by the Railway Companies to advertise attractions near it its stations. Also, around this time the architect Leslie Green designed 33 stations for the deep level tubes railways. By 1908, the three Yerkes Tubes were starting to unify into one company using the same logo (UndergrounD) and differentiating between the various lines using colours on maps (although not necessarily the same as those in use today). At this time there was also a drive to increase off-peak usage through facilities such as shopping tickets for ladies. Around this time, some of the main-line companies brought out advertisements to show their connections with the Tube Lines.

The Central London Railway was the only one to offer a parcel dispatch service where tricycle-riding messenger boys would collect from the sender's office and take to the train. At the destination station, another messenger would collect the parcel and take it to the receiver. This railway also pumped ozone into its stations using equipment provided by the Ozonair company, and advertised the fact as a positive addition. It was not realised at the time that Ozone is actually poisonous.

The first escalators were opened in 1911 at Earl's Court and two poster images were shown for Paddington and Charing Cross stations, advertising their new escalators which were opened in 1913 and 1914 respectively.

During the First World War publicity became much more utilitarian and plainer, without pictures or diagrams.

There followed the usual Q&A session after which the meeting then thanked Antony in the usual manner.

Amanda Griffiths