

# Review



Institution Fellow, Bob Wodehouse, enjoyed this comprehensive coverage of London Underground's 150-year design history.

## London Underground Manual:

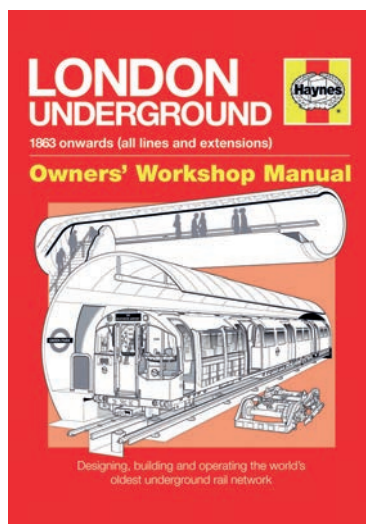
Designing, building and operating the world's oldest underground rail network

**Author:** Paul Moss

**Publisher:** J H Haynes & Co Ltd

**Price:** £21.99 (hardback)

**ISBN:** 978-0-857-33369-8



The author has fully understood all the design and operating constraints that affect the working of the London Underground. The book features many photos covering the early stages of development, right through to the present day. The book covers the origin of the Underground; from the Act of Parliament, through to the development of trains and signals and then onto communications, signage and CCTV.

What this book clearly brings to light, is London Underground's quite extraordinary ability to absorb and showcase the latest inventions. This meant that on its own initiative, it could take these inventions one stage further and apply its own innovations in such a way that it led the world in underground train operation and development generally. This allowed it to optimise its assets operationally. For example, in 1909 the headway on some of the lines was up to 42 trains an hour. All this, against a background of fast evolving market opportunities from people travelling to work within London and to the new department stores that were opening. The development of the interior train design to allow for passenger movement and maximum usage of space is covered in detail.

The author reviews the various operating methods; from those of the first private companies, onto nationalisation, through to the PPP contract and the present day. He makes a good point that Tube Lines Ltd delivered to budget, but at a later date could not agree costs with the UK Government and also that Metronet went into administration. Recently, Tube Lines Ltd was the major contributor to a joint venture that received an ICE London Civil Engineering Award for relining part of the Jubilee Line tunnel (in engineering hours) between Baker Street and Bond Street. One hopes that this engineering feat will be included in the book's next edition.

The manual is well presented and the subject matter is covered in excellent detail, giving a clear picture of who did what, when

and against what background. The reader is given a glimpse into the future with what Crossrail stations and concourses will look like. Indeed this manual has the opportunity to be regularly updated through subsequent editions.

This is the sort of book you can dip into on occasion or read from cover to cover. All in all, an excellent book, presented well and one for either the enthusiast's desk or the generalist's reference library.

**"THE MANUAL IS WELL PRESENTED AND THE SUBJECT MATTER IS COVERED IN EXCELLENT DETAIL"**



### Robert Wodehouse CEng, FISTructE

Since 1999 Bob has worked for London Underground as senior engineer and then as the principal design engineer on the Step Free Access programme for London Tube stations. Subsequently, he has been involved with subsurface tunnel assessment, tunnel relining and lift upgrade works. He has published a book on glass reinforced cement, several papers and won the Institution's Clancy Prize in 2012.