

# Review



Robert Thorne is impressed by the narration and illustration of a book charting this engaging period in London's structural history.

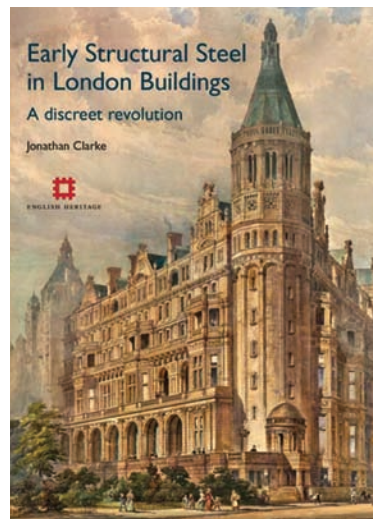
## Early Structural Steel in London Buildings: A discreet revolution

**Author:** Jonathan Clarke

**Publisher:** English Heritage

**Price:** £75.00 (Available to Institution members purchasing via the Institution's bookshop for £49.75 + postage and to non-members for £59.75 + postage)

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**Historians in the UK have reluctantly had to admit** that in the development of building structures, America stole the lead in the late 19th century. As such, attention shifted from the famous British exhibition buildings, railway stations and market halls to the advent of the skyscraper in New York and Chicago. It is also conceded that when steel framing arrived in London, for example in the much-publicised case of the Ritz Hotel (1904-5), it was with the help of American know-how and site management.

Jonathan Clarke does not wholly dissent from this perceived view. Instead he assiduously qualifies it by drawing attention to how steel was introduced into construction; not to build skywards but to produce more structurally efficient, cost effective buildings. This is a fascinating story which he tells and illustrates superbly. From a base in the preceding use of iron he takes the account forward to 1914, first in a series of scene-setting chapters and then in five further chapters dealing with different building types. The Ritz gets the attention it deserves, but is no longer the sole star of the show.

'Discreet' in the author's subtitle is taken to imply 'prudence'. Clarke argues that designers were initially cautious about steel

because they didn't trust its quality, and because of a professional conservatism which manufacturers were slow to dislodge. Dorman Long produced its first section book in 1887 but it was not until some years later, that open hearth steel eclipsed wrought iron. Building regulations also engendered prudence. The 1894 London Building Act

**"THIS IS A FASCINATING STORY WHICH HE TELLS AND ILLUSTRATES SUPERBLY"**

provided no guidance on allowable stresses and loads. It was not until the Steel Frame Act of 1909, that framed construction was fully permitted (ironically with such demanding technical standards that many architects and contractors were scared away).

There is also an argument to suggest that the book's subtitle could equally have

been 'A discrete revolution'; alluding to the distinction between iron and steel. Many of the earlier iron buildings attracted attention because the structure was on display. By contrast, except in industrial buildings, steel came into use hidden by brick, terracotta or plaster. Steel allowed theatre architects like Frank Matcham to erect daring cantilevered balconies. Better-lit, unobstructed office spaces could be built. Municipal buildings, hotels and clubs could be designed and erected more economically; some fully-framed but many simply employing steel where it was most effective.

Clarke concentrates on London, the city he knows best, but allows a role for developments in provincial cities, with their less restrictive bye-laws and more open dialogue between designers and contractors. Manchester led the way following the completion of the Manchester Ship Canal, which inspired new warehouses, factories and commercial buildings (notably the colossal skeleton-framed Midland Hotel (1898-1903)). Lessons in the contract management of framed construction made their way to London via the dynamic American contractor James C. Stewart, who completed an extension to the Savoy Hotel ahead of the better known Ritz.

The Manchester story suggests that there may be much more to be said about UK steel construction outside London. But whatever is unearthed, this book will undoubtedly remain the key text on its subject, for both historians and anyone concerned with the structure of existing buildings.

### Robert Thorne

Robert Thorne is a consultant at Alan Baxter & Associates, currently advising on railway electrification projects. Among his many publications are *Structural Iron and Steel 1850-1900* (2000) and with Jack Simmons, *St. Pancras Station* (2012).