London's Booming Infrastructure Business

The Building Centre
26 Store Street
London WC1E 7BT

28 March – 25 May 2013
Monday to Friday 9am – 6pm
Saturday 10am – 5pm
Closed Sunday

www.newlondonarchitecture.org/ptdexhibition

This catalogue is published by NLA to accompany the NLA exhibition
Planes, Trains & Drains: London’s booming infrastructure business
© NLA — London’s Centre for the Built Environment
# 01 Introduction

London's roads, river and rails are the arteries that keep our great city alive. Our Tube, buses and trains together carry over 10 million Londoners every day. Our roads are some of the most intensively used in Europe. Our transport system is the lifeblood of our city.”

— Boris Johnson, Mayor of London

Infrastructure is the key to a well-functioning city, and London is fantastically well served by its infrastructure. It could hardly be so pre-eminent a global city were that otherwise. As the Mayor of London points out, over 10 million rely on its transportation to go about their daily lives. International businesses base themselves here knowing they can rely on all aspects of London's infrastructure to compete efficiently. And our high-standard of living, though of course under pressure since the recession, is built on and sustained by the enormously sophisticated systems that deliver our utilities and which guarantee that our journeys, wherever we chose to make them, can run to a reasonably reliable timetable.

Of course, difficulties occur. Road congestion is often crippling, trains run late and tubes are delayed. And the bottom line with infrastructure is that unless it is consistently maintained through long-term investment, today's accelerated pace of change can quickly expose deficiencies in even the most impressive systems. Certainly, the problems are well known. Report after report indicts Westminster politicians for failing to make long-term investment in London's infrastructure, and dire warnings are issued over our faltering competitiveness.

These warnings have not gone unheeded. That is why so much money is currently being invested in London's infrastructure on magnificent projects like Crossrail and the many station upgrades, and why so much investment is being planned for new transport links, sewage systems and possibly a new airport for London. And the value of investment is not confined purely to the supported project — vast swaths of the capital including Stratford and King's Cross are benefitting enormously from the regeneration that improved transport links can deliver.
Many will argue that still not enough is being done, and that we must not rest on the laurels of Crossrail, for example, but must commit now to Crossrail 2 if we’re to cope with the increases in the city’s population and other pressures.

What’s undeniable is that there is always more that can be done to make a city truly fit for modern purpose. But at a time like this in London’s history when so much investment is being made, it seems right to acknowledge it and the people who are transforming the city in front of our eyes.

The purpose of this NLA publication (and the exhibition it accompanies) is to highlight the wealth of activity taking place at this moment in London. The range and scope of current infrastructure development, spurred in part by hosting the 2012 Olympic Games, is on a scale that has rarely been seen before, and is compared by some commentators to the achievements of the Victorians.

There is an element of truth in that, which we explore in this report, and it’s certainly the case that the Victorian engineering triumphs were built on a long-term vision that many of the projects we feature also share.

That vision can take many different forms, and there are some working in the built environment today who have grand visions of how much better London could be as a city if certain schemes were adopted. The discussion around London’s airports has inspired several grand projects that could transform the city in exciting ways. The railway building programmes are opening up neighbourhoods of London to the possibility of superb new public spaces, freed from traffic, in a style that would be applauded by a Nash or Haussmann.

Many of these projects have a long way to go before they can be realised. And given the difficulties of funding them, or even the sheer practicalities of building them, many never will proceed beyond the drawing board.

But they serve as an inspiration of what London could be like, and that is valuable in itself. And they also serve as a reminder to all of us that infrastructure investment can unlock and create great wealth for the citizens of London.

Infrastructure investment has historically been seen by governments as ways to create jobs and spur economic growth, and the current Government has declared its commitment to kick-starting major schemes across the nation but also in London to achieve precisely that. Over 30 mega infrastructure projects, some of them in London, are now being closely monitored by a Cabinet committee to ensure they are delivered as speedily as possible.

However, the parlous state of the public finances does not allow Government to fund all these schemes itself, as it would have done in times gone by. Money needs also to be injected by the private sector, and much discussion is taking place over how best to marry the interests and resources of Government, developers and utilities companies. New hybrid financial models are emerging, and the cross-fertilisation of cash achieved on Crossrail and now also with the planned extension to the Northern line give hope that the barriers to new investment are not insuperable.

It is then a question of how quickly the chosen projects can navigate their way through Britain’s notoriously dilatory planning regime — another issue we examine. Changes have been instituted in the way large infrastructure projects can proceed, but this is uncharted water and no certainty of delivery yet exists.

Whatever the pace and progress of future schemes, London can be proud of the steps it is taking to address its ongoing infrastructure requirements. It’s our hope that this publication and exhibition do them full justice.
How infrastructure underpins London’s global status and how we compare to the Victorians

London ranks consistently as the second most important global city in the world. It sits just behind New York in terms of political, economic and cultural influence on international affairs.

Underpinning this elevated status is the city’s infrastructure. In the most fundamental way, over 8 million Londoners’ standard of living and the lives they lead depend on it. Just as importantly, without reliable and up-to-date rail, road and air links, utilities and communication systems, leading international companies would not be based here. Nor would our own financial services sector or our arts and media industries have grown so powerful and created so many jobs. If London’s infrastructure failed to perform its crucial role properly, the capital’s, and the country’s, wealth and international influence would suffer drastically.

Adjusting to the future

Yet however well infrastructure copes with current needs, it must constantly adapt to future demands. In London’s case, these are daunting. By 2031, there are forecast to be around 1.25 million more people in the capital (taking the population to 9.2 million) and over 750,000 new jobs in the capital, generating at least three million additional trips each day. By 2031, road congestion is forecast to rise by 17 per cent and London’s waste by 55 per cent.

All this places new pressures on London’s infrastructure that must be addressed if quality of life, productivity and international competitiveness are not to suffer. In addition, low-carbon targets must be met — which requires new approaches to energy usage and sustainability — and communication links needed to be strengthened and made more robust to achieve superfast connectivity and to pave the way for the industrialisation of the internet.

Infrastructure drives social and geographic change

To its credit, London grapples with these issues unceasingly. Given that agreement on the best way forward is hard to establish, progress is not always smooth. But there have been impressive achievements in urban regeneration in areas such as Stratford, the Thames Gateway and King’s...
Cross, where new rail links have opened up major opportunities that embrace homes, offices and retail developments. At King's Cross, the decaying industrial landscape is being transformed into one of Europe's largest-ever urban regeneration projects.

Stratford has benefitted enormously from staging the Olympic Games. Although the area was due for regeneration, the preparations for the Games accelerated the investment. £200 million was spent on the upgrade of Stratford International station and its links to the City, London City Airport, the emerging Royal Docks area and High Speed I, the link to the Continent. When Crossrail is complete, the journey from Stratford to Heathrow will take just 49 minutes.

The Olympic Village is now known as East Village, a development of nearly 3,000 private and public tenure housing with world-class health centres, schools and the largest new urban park created in Europe in the past 150 years. Up to 20,000 new homes are planned in the next phases of development. And Westfield Shopping Centre is a state-of-art retail palace.

Stratford’s impressive transformation is part of an ambitious masterplan for regenerating East London’s Thames Gateway. Over £9 billion of public money is planned for investment in the Thames Gateway project, which incorporates a series of public-private sector developments planned across 16 different local government districts on both sides of the Thames in an area that is home to 1.6 million people, including many areas of high social deprivation. The area is split into numerous development zones, one of which takes in the London Gateway, a major international port now under construction near Thurrock which comprises a new deep-water container-ship port and a logistics centre that will be linked to the key transport arteries of Britain and the Continent.

Another major east London project on the drawing board is Wood Wharf, a redevelopment project adjacent to Canary Wharf that has been approved by Tower Hamlets for the creation of 460,000 sqm of office space and 1,500 homes. Public consultations on how the scheme should proceed are currently being held.

The Victorian builders — a golden age?

Because of the time scales involved in building major infrastructure, long-term planning is essential to forestall city chaos. Politicians, business and administrators need to share a vision of what needs to be done. And they must have the drive, the single-mindedness and the financial resources to realise their vision.

At difficult times like today, when badly needed new infrastructure projects all too often become embroiled in politicking and red tape, we often look back to the Victorian era and admire the revolutionary grand projects of the day — the overhaul of London’s sewers, the explosion of railway building and the creation of the world’s first underground transportation system. We applaud these extraordinary schemes and hold them as templates for what today’s arguably less bold and courageous city planners should be emulating.

The truth is, though, that in many ways the Victorians took just as long to create their splendid schemes as we do now; visionaries had to fight just as hard to persuade politicians to back them; and investment was as hard to come by as it is today.

The Golden Age of Infrastructure it may well have been, and we are indebted to Victorian visionaries for how well they built their projects, many of which we still rely upon today. But at difficult times like these, it’s as well to remember there have always been difficult times, and 19th century Britain was no different.

How it was — and the difficulties of transformation

In 1810, London was a city of 200,000 cesspits, with soil workers removing sewage at night. It stayed that way until the Great Stink of 1858 brought the city to a near-standstill and Joseph Bazalgette was given £3 million to perform the Herculean task of cleaning up London’s water and sewage system.

The great railway schemes of Brunel and others were fought all the way by canal and coach operators. Parliamentary debates over whether to grant permission for the lines regularly took 50+ days at Committee stage. “So many irons in the fire and none of them hot” was a constant refrain from the young Brunel.

Terrible congestion dogged the city throughout Victorian times. The horse was the dominant mode of transport up until the 1880s. Commuters walked miles to work. London was pock-marked by appalling slums. And the population increased from 1 million at the start of the century to 4 million by the end.

Reformers, engineers and politicians were acutely conscious of the failings of London’s infrastructure. Doing something about them was, in many ways, far more difficult than it is now. There was no planning in the modern sense, and housing, office and transport development was determined by the brutal interplay of competing commercial interests and market forces.

In the words of LTC Rolt, there was “an orgy of commercial opportunism and wild speculation” with competing entrepreneurs viewing railways, water supply and housebuilding as get-rich-quick schemes.