



Terry Frost, 'Rainbow over King's Cross', 1999

King's Cross Station

150 years old
252 metres long
92 metres wide
41 hectares of regeneration
24 stakeholders
12 platforms
6 underground lines
50 million passengers annually by 2012
£400 million investment
7,000 square metres new concourse
60 seconds from St Pancras Station

Change and delight. For the practice, and for me personally, the redevelopment of King's Cross station isn't just an exercise in updating an old Victorian railway terminus and creating a vastly improved travelling condition. I believe the reinvention and transformation of King's Cross station is, quite simply, the most significant piece of place-making in London for many years. And like its near neighbour at St Pancras, it promises to be a marvellous *grand projet* in the great European tradition. So let's salute this endeavour and look forward to celebrating its completion to coincide with London's Olympic in 2012. **John McAslan**



GATEWAY TO THE CITY

by **John Armitt**,
Chief Executive
of Network Rail

Stunning new architecture, thoughtful restoration of the old, along with enhanced infrastructure is what passengers will see at King's Cross in the next few years. Emerging from behind the scaffolding will be a remarkable blend of form and function; creating a world-class transport hub. This will seamlessly link domestic, European and underground rail.

The railway is one of Britain's success stories. Passenger numbers have increased by 40% in the last ten years and are projected to rise by a further 30% over the next decade. The development at King's Cross is an integral part of Network Rail's ambition to grow the railway. Currently 40m passengers use the overground station

every year; we forecast that in ten years time that number will have increased to 50m.

In total – including the enhancement our partners at Transport for London are delivering for King's Cross-St Pancras Underground – the project represents an investment of £400m. The centrepiece of the development is a stunning 8360 sq metre, semi-circular concourse with a radial glass roof that will form a connection with St Pancras. This concourse, some three times the size of the existing one, will aid circulation and hugely improve the passenger experience.

In addition to the new western concourse, a new platform will

be built at the station which will increase capacity on the East Coast Main Line. Also, there will be extensive refurbishment of the existing platforms and re-glazing of the impressive twin barrel roof. Passenger amenities will be enhanced with new information systems and escalators serving the platforms. Works underneath the station will widen service tunnels to modernise facilities and aid the smooth running of train services.

Network Rail will also be increasing the public realm – the demolition of the existing 'temporary' southern concourse will allow the restoration of the grade 1 listed façade of the station and creation of a new piazza. The massive new public space to the front of the

station will be larger than Leicester Square and will contribute to the wider regeneration of the King's Cross area.

The King's Cross area will see remarkable regeneration in the next few years too. This will be aided by the station redevelopment, the relocation of the Eurostar terminus to St Pancras and the high-speed 'Olympic Javelin' services that will run from there. Wider regeneration will bring new residential, retail and cultural facilities to what was once a down-trodden area. Network Rail is well aware of the role that stations can play in regeneration and has ambitious plans for Euston, Victoria, Waterloo and other stations all over the country.

We at Network Rail have the unique honour of safeguarding Britain's railway architecture and history. We are also building a growing railway, a railway that responds to demands of passengers and freight customers. At King's Cross we have the opportunity to show the world the architectural and engineering triumphs of both today and yesterday as we create a world class transport hub. The eyes of the world will be on London in 2012 – the new King's Cross will be a fitting dramatic new gateway for the city.

Above: Western Concourse, interior perspective

by Stephen Bayley

KX2.0

"I see no reason to suppose that these machines will ever force themselves into general use" was the Duke of Wellington's magnificent, supercilious view of the train. But the Iron Duke's opinions were formed in Georgian London where the notion of democratic travel was undesirable, even if it was imaginable in the first place. Then the signals changed: Victorian London was the first megalopolis created for and by mass-markets. Its great monuments belong to public services, not to God. And the greatest of the public services was the railway. An anonymous writer in *Building News* in 1875 declared "stations are the cathedrals of our century".

The railways were both a product of Victorian psychology and, when they were built, an influence upon its development. Ponder for a moment the use of the word "terminus": how pleasingly strange that it suggests both an end and a beginning. With the coming of the railways, Dr Arnold said "feudality is gone for ever". Look at an early edition of *Bradshaw's Railway Companion* and you can see that the first railway lines only tentatively approach the centre of Regency London, rather like busy spermatozoa nuzzling towards an unfertilized egg.



Euston in 1837 was the first mainline station and architecturally, it was like the Duke of Wellington, more connected to the delicacies and refinements of the inward-looking Georgian era than to the swagger and bluster of expansionist High Victoriana. Philip Hardwick's monumental Doric propylaeum (vandalously destroyed by British Rail in 1961) was both actually and metaphorically a gateway. And if its romantic-classical style was comfortingly reminiscent of country houses, then that perhaps made the new-fangled trains more acceptable to a wary population. After all, early filling stations had thatched roofs.

It is important to understand that Euston and the other mainline stations that followed it were built on semi-rural land. As late as 1803 William Blake wrote in Jerusalem "Pancrass and Kentish-town repose...upon our meadows green". While the Victorians welcomed railways, they were also cautious about them. None more so than Ruskin. An act of 1846 actually prevented the railways moving further into the centre of the city. Even when St Pancras was built twenty years later it was the job of Thomas Hardy, working as an architectural assistant to Arthur Blomfield, to clear up St Pancras Old Church's graveyard: a country church stood in the way of metropolitan progress. Hardy noted an erupting

infernal apocalypse of thigh bones and skulls, a top soil that he said was unappetisingly "mixed to human jam". Such an impression was made that the motif recurred frequently in poems such as "The Levelled Churchyard" and "In the Cemetery". Indeed, it is fair to surmise that the whole experience of exhumation in the cause of advanced transport infrastructure confirmed for Hardy the presence of death in life. A thriving Hardy Tree still stands in St Pancras Churchyard, surrounded by a jumble of confused headstones, the dead making way for the travelling.

King's Cross, the terminus of the Great Northern Railway, followed Euston. It was built on land hitherto occupied by a smallpox and fever hospital, so bones and ghosts played their part here as well. But King's Cross was of a more optimistic age. Suddenly, the isolated citizens of Cambridge, Peterborough, Hull, Doncaster, York, Newcastle and Aberdeen were set free. Some myths were attached from the very beginning, others developed. The site is reputed to be that of Boudicca's last stand and the fanciful maintain that she is buried underneath Platform 9. Here her neighbour is Roland Rat, an inhabitant of the local sewers. Harry Potter's platform is in a gap in the space-time continuum between Boudicca's platform and Platform 10 (although the film-makers actually found the phantasmagoric Gothic of St Pancras better suited to the wizard-child's station of choice). From his home at 221b Baker Street (an address that does not exist), Sherlock Holmes made frequent pipe-sucking ventures to King's Cross.

Left: Pentonville Road, 1883. Above: main train shed, 1950



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King's Cross and the other great termini were defined by branding, the needs of the pioneer railway companies to express their corporate identity.



Clockwise: the current southern ticket hall; a general strike picket in York Way 1926; a visualisation of the proposed new southern elevation and piazza; overleaf: entrance to the Underground

But there is nothing mythical about King's Cross itself. On the contrary, it is a superlative example of early Victorian matter-of-fact. So much so that while the architect Lewis Cubitt would not have recognised the twentieth century concept of Functionalism, images of his station were later co-opted into Modernist lore: King's Cross features both in Pevsner's epochal *Pioneers of Modern Design* (1936) and in J.M. Richards' *Introduction to Modern Architecture* (1940), the first popular book on the subject. It and buildings like it represent a non-conformist strain in English architectural history, as Richards eventually explained in his great 1958 book *The Functional Tradition in Early Industrial Buildings*.

King's Cross represented a new attitude to station design, distant from the frank display and evasive psychology of Euston's Doric: "simple, characteristic and true" in one admiring contemporary's words. This is, perhaps, because the architect, Lewis Cubitt (1799 – 1883), came from an established family of builders and developers: his elder brother Thomas built Belgravia and revolutionised building trade practices. But another influence was surely the parsimony of shareholders in the Great Northern Railway Company, members all of the muck-and-brass school of thought. When a Great Northern Hotel was needed, splendour was not contemplated. Rather, it was shunted around the side, an apology, an afterthought of these practical men.

For the station Cubitt designed two round arched roofs with laminated timber beams to cover, according to the railway theory of the day, the twin platforms for coming and going. The spans are 71 feet. Wood was cheaper, but less durable, than iron and was soon replaced. The façade is plain, undecorated brick: the dominant motif is the diagrammatic cross-section of the engine sheds themselves. Between the two massive arches is a 120 foot clock tower, somewhat Italianate, a more magnificent version of a device Cubitt had already employed several times in smaller Home Counties stations.

At the foot of these monumental arches was a five bay arcade. To the east a third arch covers a carriage drive, a motif reflected on the west where the structure housed offices and waiting rooms. According to *The Builder* in 1851 at King's Cross the architect did not seek flamboyance, ostentation or effect, but was alone satisfied by "the largeness of some of the features, the fitness of the structure for its purpose, and a characteristic expression of that purpose".

King's Cross and the other great termini were defined by branding, the needs of the pioneer railway companies to express their corporate identity, although it was not at the time so known. Still, these were independent profit-making organisations with shareholders to satisfy and architecture was a part of corporate communications. If Euston was one style, then King's Cross had to be another. And later on the style of the new St Pancras was determined almost in opposition to Lewis Cubitt's austere King's Cross.

St Pancras has been called lots of things. To Ian Nairn in one of his fits of puritanism it was merely "fancy work", not so fine nor so worthy as the sterner King's Cross next door, a more obviously engineered structure. John Summerson, the great historian of Georgian London, found it "nauseating". It is regularly described as a wall of red brick (in fact, built of Grippe's Patent Nottingham stock with dressings in Ancaster stone punctuated by shafts of grey and red Peterhead granite). The romance of St Pancras and that fairytale skyline was captured in sentimental oils on John O'Connor's famous 1881 canvas *Pentonville Road*.

In contrast, King's Cross has been admired rather than loved. Until very recently, it was the shabbiest of the north London stations. A poor one storey concourse was built in 1972. Intended as a temporary measure, it is still there thirty-five years later obscuring the quiet calm of Cubitt's great front elevation. Early writers on rail travel described the hilarious misadventures of the first lackadaisical passengers: entirely unprepared for the novelty of speed, there are accounts of people falling off trains, getting run over by trains and having the integrity of their skulls compromised by bridge piers when hanging out of trains. Today the dangers of King's Cross are different: multiple injuries caused by licks of latte diminishing the coefficient of friction on the part-worn 1972 composite, artless confusion in signage, over-crowding, maddening circulatory problems, shabby shops and generalised, low-level, but nonetheless insistent, crud everywhere. And pigeons.

Time and neglect had taken over, as they often do. But in 1998 John McAslan + Partners was commissioned to design a masterplan for a revived King's Cross, bringing the old station into step with the dramatic developments at St Pancras next door where the Channel Tunnel Rail Link – now re-branded High Speed 1 – opens for international service on 14th November 2007. King's Cross will again play its part in what the transport planners insist on calling a multi-modal interchange. More poetically, St Pancras will become the best and most important railway station in the world, while the new works will make King's Cross once again a worthy neighbour.

The £400m restoration and redevelopment was announced in 2005. Removal of the ugly and inefficient seventies concourse frees up the façade so Cubitt's bold composition will be enjoyed by the 50m people coming and going through King's Cross every year. There are simple functional benefits as well: improved access to the underground, better shops, more space, more air, more clarity and intelligence. The concourse is now moved to the west of the station, covered by a handsome, diagrid roof drenching waiting travellers with welcome light. Besides the obvious practical benefits there are benefits of aesthetics and amenity as well: the expressive purity of Cubitt's original composition can again be enjoyed while a new public square is created in front of those magnificent twin arches, something specially welcome in an area suffering more than most from coagulated traffic and crowded pavements.



When James Fergusson wrote his *History of Modern Styles of Architecture* (1862) he said Paris' Gare de l'Est was much superior to King's Cross because "from its higher degree of ornamentation...it becomes really an object of Architectural Art". Ordinariness and light are what make good architecture

When Cubitt's King's Cross was opened in 1852, architectural writers were much fussed about "where civil engineering ends and architecture begins." That schism was demonstrated at St Pancras where the engineered elegance of Barlow's shed stands in frank denial of what Ian Nairn described as Scott's fancy work up front. The essence of King's Cross was that it never had any fancy work: it was a design of great strength and honesty, a pure expression of purpose that resulted in well-mannered elegance. And after thirty-five years that is again becoming clear.

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THE People

Newsweek
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Evening Standard
What's hot in London
Cinemas
Theatres
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See the Evening Standard every night

Evening Standard
Classifieds call

Evening Standard
WEDNESDAY
TEST TUBE TWINS FOR LONDON WOMAN 54
The number that gets results

Evening Standard
Classifieds call:
9
38
38
38
The number that gets results

Evening Standard
Classifieds call:
9
38
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The number that gets results

Evening Standard
WEDNESDAY
TEST TUBE TWINS FOR LONDON WOMAN 54
The number that gets results

Great Cross Station
Passenger Services
For London Road
South, 1981





Left: aerial view of the King's Cross basin, ©London Aerial Photo Library; above: plans for public realm integration

by Aidan Potter

CITIES IN MOTION

"The first condition of design is to know what we have to do. To know what we have to do is to have an idea and to express this idea we must have principles and a form. That is a grammar and a language." Viollet-Le-Duc, Dictionnaire Raisonnee de l'Architecture Francais du XI au XVI Siecle, 1854.

The regeneration of King's Cross is a transformational city planning initiative at an incredible and ambitious scale. What is often described as the largest urban regeneration project in Europe is

a unique opportunity to make a new Quarter and European Gateway for London. Perhaps not since the construction of Kingsway and Aldwych at the turn of the 19th century, and Broadgate in the 1980s, has such a large inner city site offered the potential to create and redefine civic identity, and celebrate London's world destination status at the beginning of the 21st century.

In this regard, the current proposals for King's Cross are an urban litmus revealing the cultural, economic, social, environmental and infrastructural preoccupations which direct planning policy

and process. The various overlapping initiatives of the King's Cross project are also informed by new concepts of urban design, all of which attempt to reconfigure this discipline to resolve multiple issues in a complicated physical and political context.

This has promoted a reconsideration of the status of "The Masterplan" to direct development at this scale. Some urban theorists and planners question whether one unifying vision can deliver a new city quarter of this size; and they ask what, if any, are the appropriate municipal regulations or guidelines that are

The Cinderella in this new urban calculus is the outdated design autocrat 'The Masterplanner' with his public space vision.



From left: redevelopment and expansion plans in 2007, 2011 and 2020.

required to control development and deliver wider social benefit. This question has promoted the search for more flexible and mobile tools to develop urban form at this scale. And central to these is the urban framework. The commonly presented argument that has replaced, or repositioned, the masterplan with the framework goes along the following lines:

- For any large urban project containing either singular estates or multiple ownerships, a strategic and conceptual plan is needed to direct development and growth over time.
- Any development at this scale will not happen all at once and must be phased and delivered over a number of years.
- Given this temporal context, change is inevitable as no development over a long period can be insulated from variations in global economic and political circumstances.
- Therefore, a strategic plan must be flexible to accommodate change and revision. And it must be sufficiently legible, at any point along the development cycle, to be quantifiable for both statutory approvals, public consultation, commercial evaluation and, ultimately, phased delivery.
- To avoid the progressive erosion of a masterplan over time by successive revisions it is more realistic to base the development on a framework of generative principles, accompanied by an illustrative masterplan.
- An illustrative masterplan is, by definition, a contingent and pragmatic proposition always offering the possibility of revision.
- The elements or decisions least vulnerable to change (or, rather, the most difficult to change) are those which define infrastructure involving the placement of roads, rails, service utilities and civil establishing works. These become the defining structure and organizational chassis of the new framework. This process makes urban design primarily a mechanism for co-ordinating infrastructure, with a more neutral attitude to the prescription of urban form.

The Cinderella in this new urban calculus is the outdated design autocrat – “The Masterplanner” with a public space vision. For perforce, if there is no absolute physical masterplan there is no need for a singular masterplanner. The process “committees” masterplanning, promoting collaboration of endeavour within a framework which is structured to allow periodic, but carefully moderated, change. Another view that supports this analysis is the observation that cities are complex, plural and democratic in nature – and the design of large areas within them shouldn't, therefore, be the product of a singular point of view.

It can also be argued that this view is consistent with the essential structure of London. A millennium of relative political stability, democracy and individual property rights has determined a loose-knit urban form by resisting the imposition of the grand urban project. Not even Wren and Nash, armed with royal assent, could implement their grand visions for London against the natural rights of individual landowners. It has, ironically, always been the more ruthless imposition of road and railway infrastructure which figured the English city, with little regard for history, urban form or community interests. In this regard, it is not surprising that 20,000 homes in Somers Town were demolished to enable the construction of the railway at King's Cross, creating the fundamental urban severance which the new masterplan aims to finally resolve.

It is true that an urban visionary may direct the initial conceptual response, or may be introduced (via selected competition) to correct, revise or enhance parts of the framework along the design path of the project. But the structured rationale of change, which defines the process, often makes the delivery of a singular spatial vision difficult because, by its very nature, it is inflexible. It is also true that a unifying spatial concept can be expressed as a generating principle in a framework, prior to its elaboration

in a masterplan. But the challenge is always this: how do you fund and commit to the delivery of an ambitious public space programme at an initial stage in a development appraisal when there is always commercial uncertainty about overall value, returns and risk. This is, perhaps, one of the reasons (together with land assembly) that contributed to the failure of Lord Foster's proposals for King's Cross, with its singular urban park as the grand parterre of the development. It may also frustrate Sir Terry Farrell's comprehensive vision for Euston Road, although this promises a significant intervention in the public realm at Tottenham Court Road and Euston Road Underpass.

Some Urbanists believe these ideas could lead to a new form of masterplanning, and redefine the role of the masterplanner as, essentially, an infrastructural co-ordinator. In this scenario, the urban framework, properly conceived, becomes a complex and layered matrix of infrastructure, development, sustainability and public space. This is the new scientism of urban design, which seeks to rebalance aesthetic and thematic urban judgments with an empirical analysis of urban form, movement, environmental and energy systems.

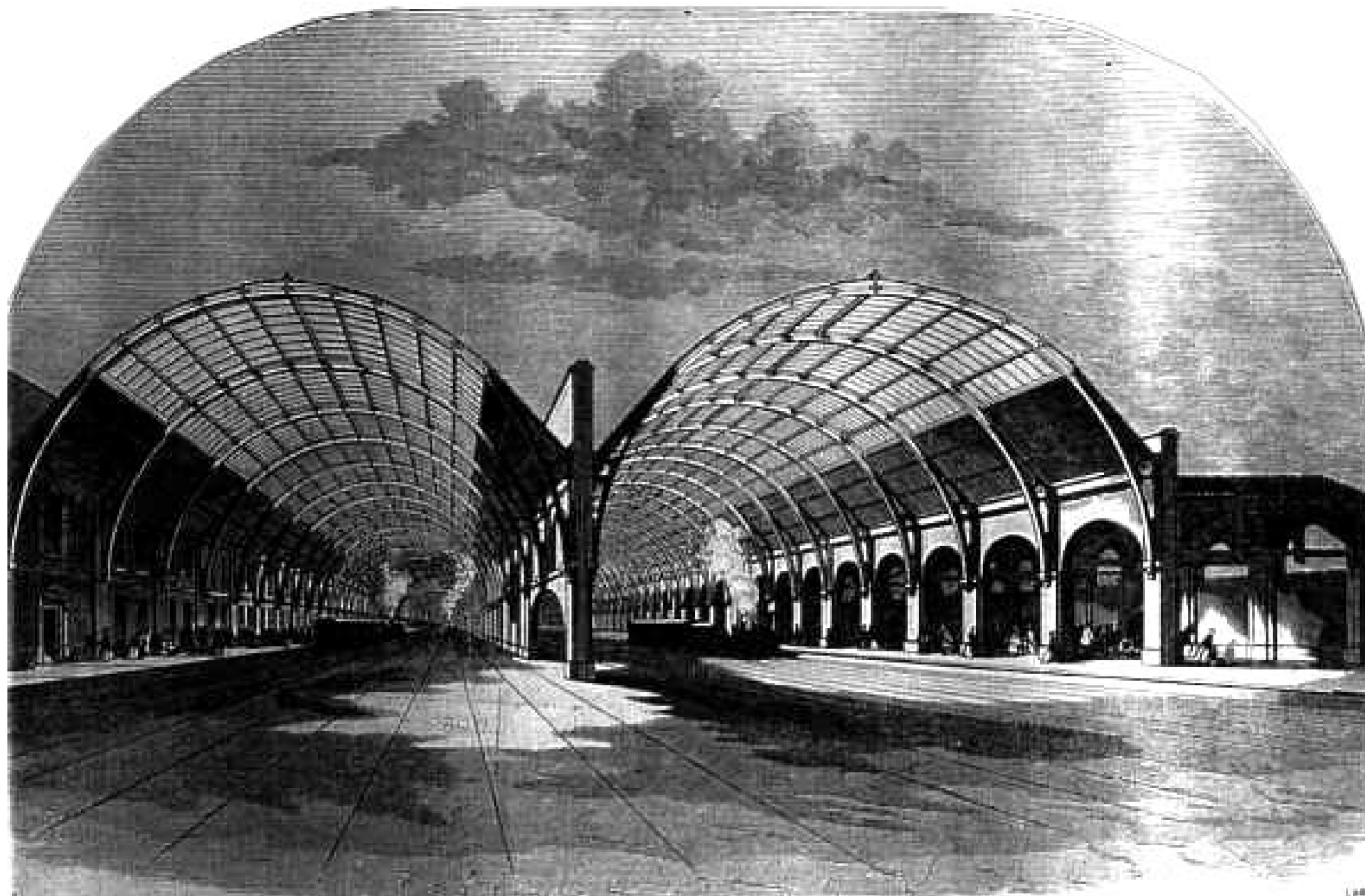
It is our view that both masterplans and urban frameworks are useful tools. Neither is adequate alone; nor does the use of both guarantee the delivery of an integrated public realm. The role of the masterplanner is certainly changing, given the primacy of infrastructural investment and the increasing environmental responsibility of urban development. But without an overarching public realm vision, and a concern for connectedness, it would be easy for the framework process to short-change the design and delivery of public space which is always the last element of construction in an urban plan.

This is why the provision of a connected and coherent public realm is one of the fundamental challenges at King's Cross. The current proposals certainly promise a radical and authentic new urban quarter for London (and a world-class transport interchange) but there remains a disconnection between the neighboured masterplans. The glue that holds these together is the public realm. And the agent to apply and adhere the parts is “The Masterplanner” who awaits appointment.

Right: local connection plan; below right: transport interventions



The glue that holds these together is the public realm and the agent to apply and adhere the parts is 'The Masterplanner' who awaits appointment.



TIME AND TRANSFORMATION

by Mark Cannata

'...but in vain I set off to visit the city: forced to remain immobile and always the same to be better remembered, Zora languished, crumbled and disappeared. The world has forgotten it.'
Italo Calvino, *'Invisible Cities'*

King's Cross Station is now considered to be one of the great railway monuments of Britain and is a grade I listed building of national importance. It falls within the top 2% of all listed buildings, and is one of only five grade I listed railway stations in England.

For it to remain in active, viable use and remain part of the dynamic life history of the city, the station buildings must continue to evolve. From time to time, this may require significant changes to the buildings as the needs of passengers, train services and railway technology changes.

Projects of this importance and scale force architects to think at a deeper level about the relationships of new and old. They pose questions about the very nature of a rationalist architectural approach. Is it enough to be highly rational? Can large scale urban redevelopment be solved, in effect, by precise diagrams? Can the spirit of the old architecture be retained?

In short, the re-casting of older buildings, and the ordering of new buildings in new spaces requires a series of leaps of the imagination starting from the very foundations of architecture and the challenge it poses.

The challenge of architecture is a fusion of context, function and materiality. But it's also embedded in human aspiration, a desire to demonstrate much more than durability and worthiness. Architecture is a human quest. It is about recognition and expression.

Victorian architects, and the Modernist architects that followed, found that this question of aspiration was complex. Yes, they could develop new ways to clad buildings, new ways to use glass or steel, and devise new architectural forms. But the influential visions of the Victorian Architects and Engineers could hardly produce an eternal architectural Reich.

Today, we might feel a more natural affinity with William Morris, who said: "All continuity of history means is, after all, perpetual change, and it is not hard to see that we have changed with a vengeance and thereby established our claim to be continuers of history."

But that doesn't mean architects have carte blanche. Change requires judgment. We forget history at our peril. From the middle of the 19th century, the technical and cultural intentions

of industrial and, later, Modernist architecture remains hugely important when assessing how best to preserve, or carefully develop, these important types of building.

We can certainly reinfuse such buildings with life through thoughtful architectural interventions. But we also know that this new life will have social and functional dynamics rather different to the architecture's original intent.

Nowadays, political and commercial interests are often a trigger for decisions to save or improve historic buildings. How does one combine architectural ideas solidified in brickwork, cast iron and glass, with ideas to do with footfall or rent-slab ratios? And how does one argue the case for technical improvements in parts of a Grade I listed building that, in theory, are sacrosanct?

Above: interior perspective of the original train shed, 1851

Right: cut-and-cover tunneling for the Metropolitan Railway in 1861; below right: a depiction of King's Cross station on its opening in 1852



that produced them. Their optimism. Their shock of the new, to borrow Robert Hughes' famous phrase. It's the sheer architectural presence of such buildings – the very idea of them – that we should seek to revive.

But buildings like these must also work for a living. They must, when circumstances and intelligent projections allow, get with the third millennium's cultural programme. They cannot remain as exhibits in a museum of architectural history.

This melange of the grittily historical and the strategic has become a very familiar challenge for us. Indeed, the processes that drive historic building projects infuse the practice as a whole. The design of our new buildings is invariably rooted in a rationalism tempered by the influence of layers of time and context – and the way these things rub up against one another. It is always the start-line of renewal projects, and the design of new buildings.

Architecture, as stated, is a human quest. A quest that applies as much to the reviving of historic buildings, as it does to the design of new ones. Historic buildings can still have a remarkable contribution to make to our towns and cities – a contribution that can be triggered for a variety of reasons. These projects require great determination, stamina and attention to not only historic detail, but to the carefully-weighted relationship of the historic with the new.

Architecture, new or old, must face the inevitability of change – perhaps even audacious change. Meaningful architecture must interpret meaningful change. We believe that historic buildings can, in the right circumstances, continue their dialogue with time, purpose, aspiration and people. They are marks of life and place. And they can still have marvellous possibilities.



Far left: Dresden station refurbishment by Foster + Partners in 2006; left: Madrid's Atocha station, refurbished by Rafael Moneo in 1985



A brief history of King's Cross Station

Situated at the junction of the former Fleet River and one of its tributaries, the construction of King's Cross Station made what had previously been the outermost fringe of London into a major national interchange.

The station was completed in 1852 to the designs of Lewis Cubitt, for the Great Northern Railway Company, to serve Lincolnshire, Yorkshire and Scotland. The station is one of the earliest major termini, built at a time of considerable expansion of the railways and employing innovative construction technology, similar to that used on the main transept of the Crystal Palace, constructed a year earlier for the Great Exhibition.

Despite the restrained dignity and apparent straightforwardness of its design, the station was widely recognized at the time of its opening as a remarkable building, employing pioneering construction technology. This was a time of great advances in industrial production and in terms of construction technology alone, King's Cross Station exemplifies the pioneering transition from timber and masonry construction, to new visionary structures that exploited the enormous engineering potential of iron and steel – a development that itself depended on the new railway system.

The station was, with its clear expression of function and technology, in many ways a proto-modernist building.

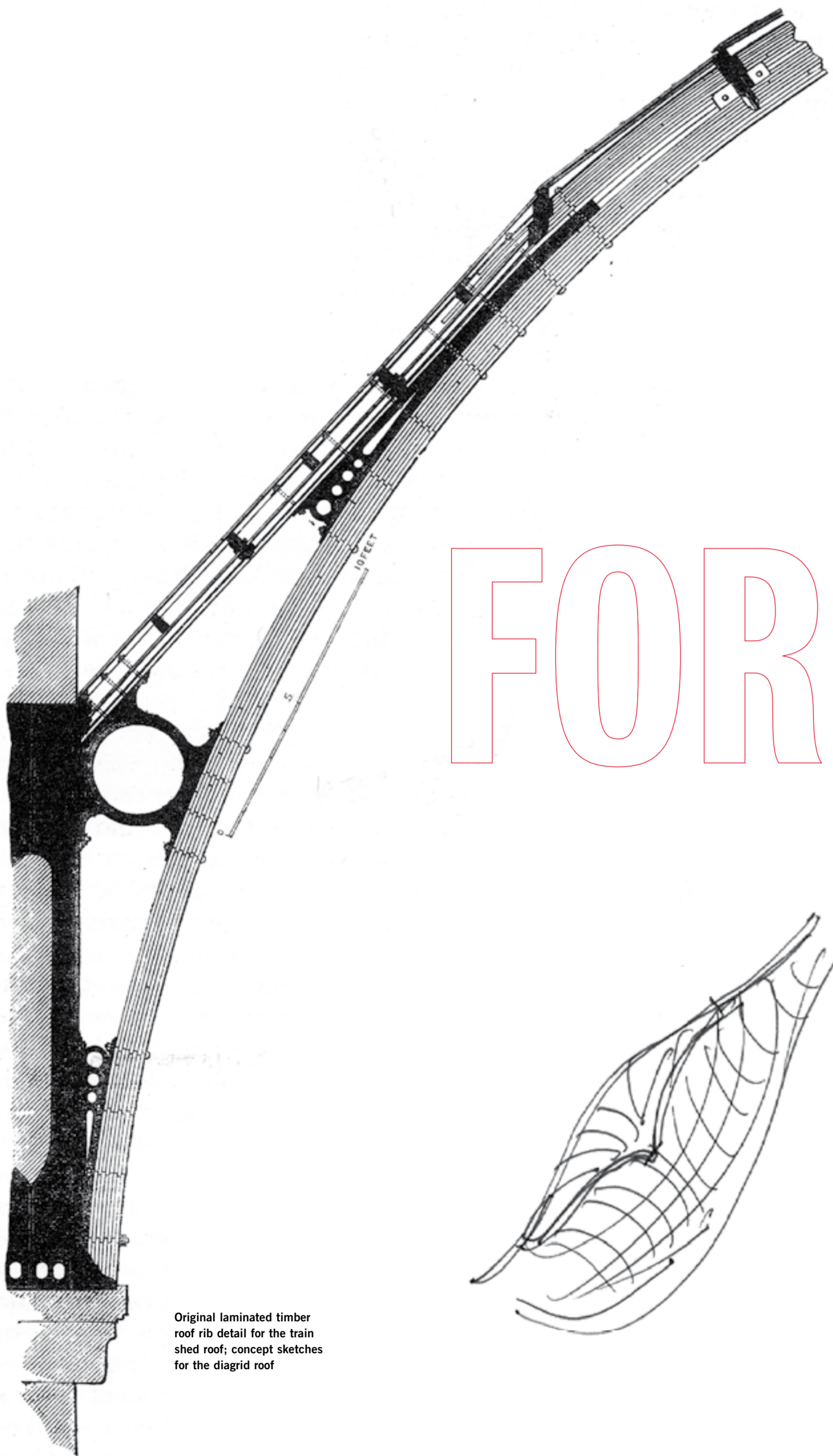


The new station was, with its clear expression of function and technology in many ways a proto-modernist building. Indeed, in contrast to many major Victorian stations that conceal their utilitarian shed roofs behind grand hotel buildings, Cubitt clearly celebrated the innovative engineering of the two train sheds, leaving them fully visible behind the monumental semicircular windows on the south elevation. The layout of the station was also logical and straightforward, with passengers arriving by foot or coach to the 'Departure' shed on the west side, via a grand Booking Hall, and arriving from the north by train under the eastern shed, for onward travel into London via the Cab Road on York Way.

From its opening right up to the recent years, the station building and adjacent land saw continuous and sustained pressure for expansion to accommodate more platforms and increased passenger traffic. This was mostly achieved by ad hoc additions at the southern end of the station, culminating with the construction of the inadequate and unsympathetic 1970s concourse.



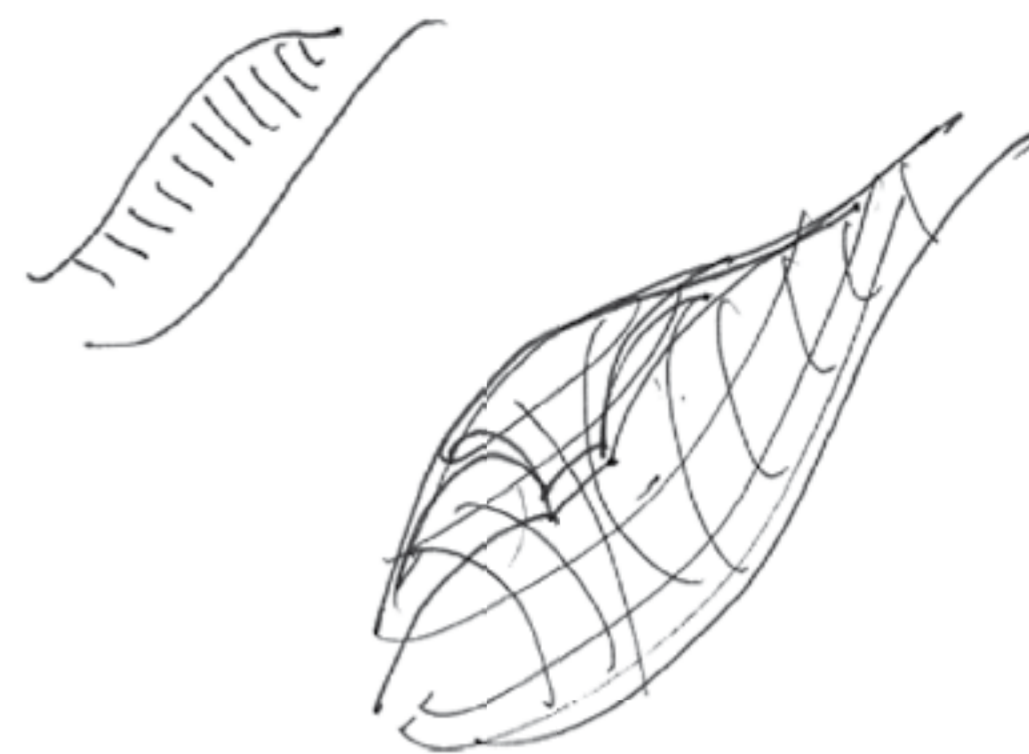
Above left: a cow being milked on the platform in 1926; above right: an elephant on York Way; left: Pentonville Road in 1899



Original laminated timber roof rib detail for the train shed roof; concept sketches for the diagrid roof

FORM FINDING

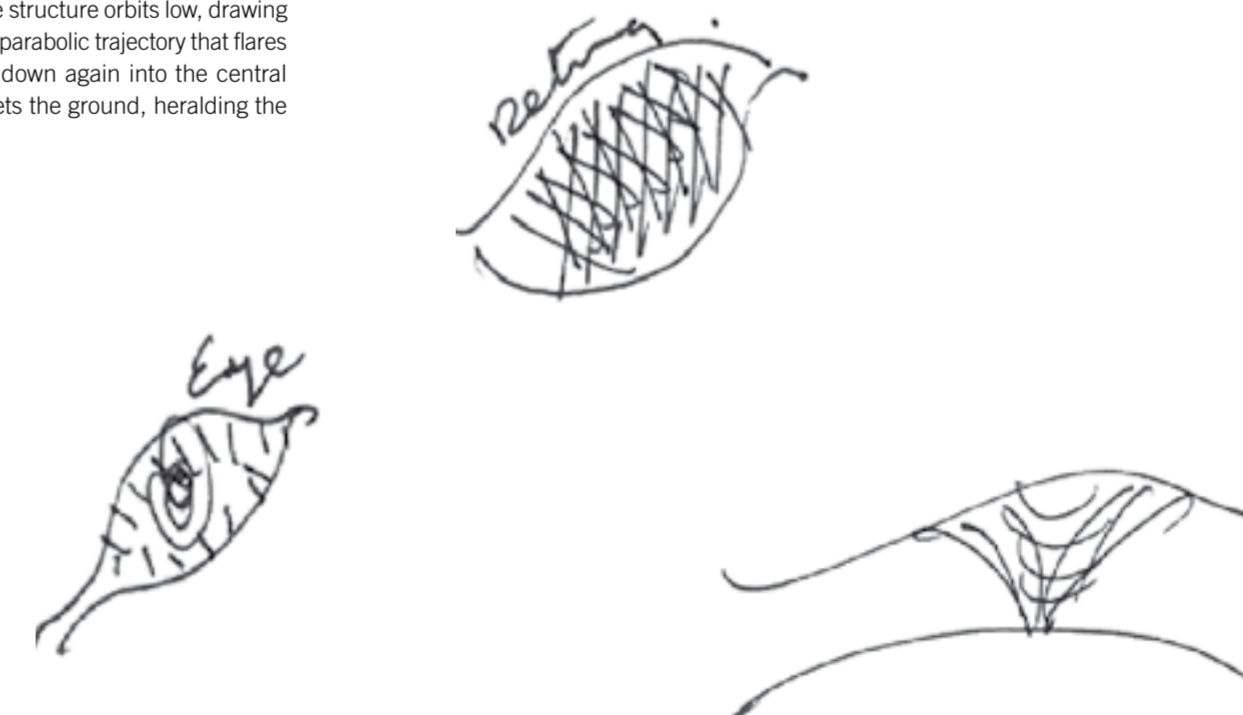
by Cecil Balmond



As we pass St Pancras Station going east on the Euston Road the darkness gathers and we enter the complications of King's Cross. The streets are mean and the buildings faceless, the twin arches of the station entrance lost in the urban congestion. Nothing is clear – where are we going?

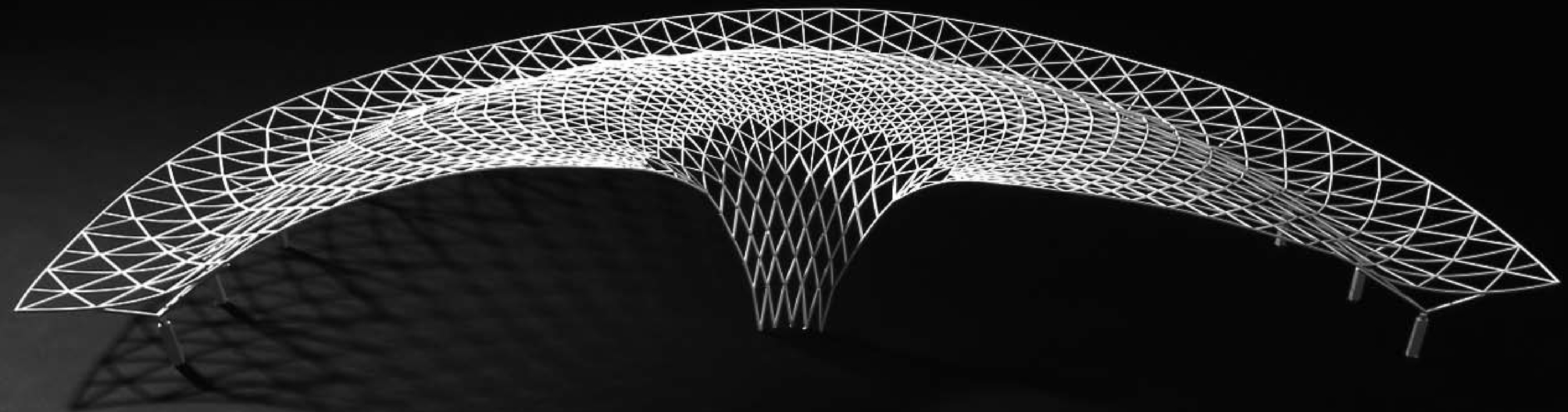
A new plan illuminates. A triangular plaza borders Pancras Road and the Euston Road, and on its largest oblique the façade of the original station is celebrated again. But this is just a signal, a past emblem: the real entrance is now along Pancras Road, a huge disc of a structure along the side of the station radiating out to welcome the visitor. A massive eye opens over the complex interchange: passengers, trains, mysterious interconnections, escalators cascading down into underground tunnels – all lie beneath and beyond. The rim of the structure orbits low, drawing in the visitor. In section, the roof is a parabolic trajectory that flares out on all sides only to be pulled down again into the central focus, a patterned screen that meets the ground, heralding the entrance into the station.

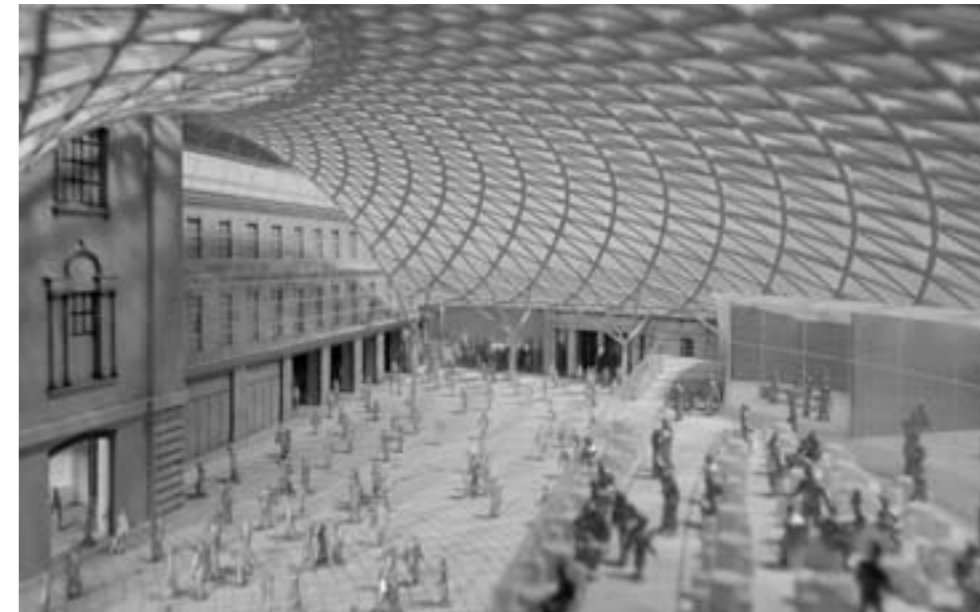
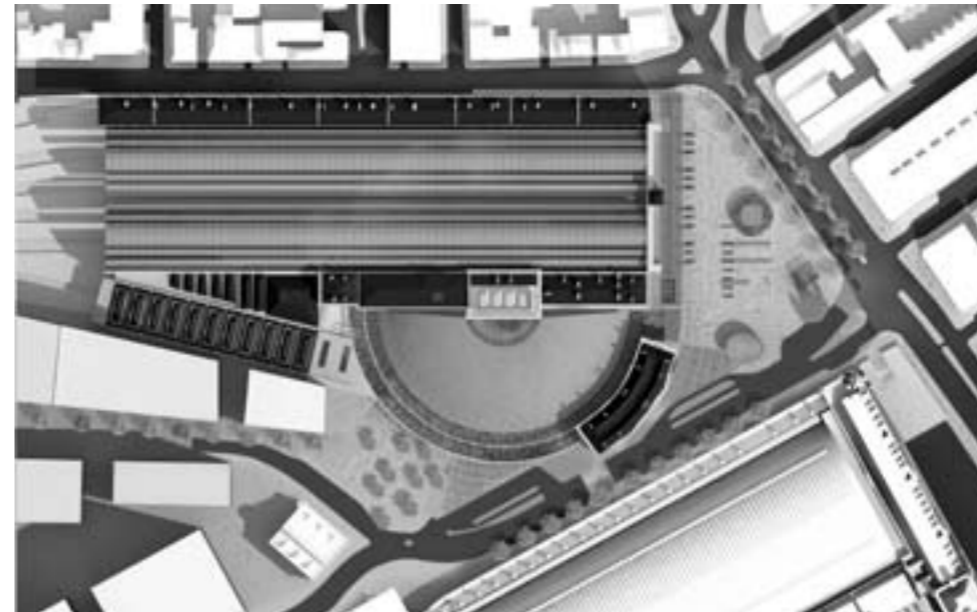
A structure of thin steel weaves intricate three-way patterns over the vault, one direction running towards the entrance, the other two spiralling diagonally, pulling against the line of that first indicator. The result is a retina of diamond cells, capable of opacity, transparency, and a widening and narrowing horizon as the curvature changes from outer rim into plunging interior funnel. As the roof converges, the pattern closes and slips down like a mantle to the station entrance, which also serves as a trellis column. A veiled threat, or playful welcome?



by Hiro Aso

TICKET TO RIDE





The proposed western concourse of King's Cross station will be the biggest and most visually thrilling architectural expression of rail travel in London. But the beauty of this new architectural tour de force isn't simply a question of its iconic canopy. The real triumph of the design lies in the way the structure has rationalised a site in the grip of potentially intractable multi-stakeholder issues.

The design of the western concourse is, ultimately, an act of architectural and urban conviviality – one whose final form has provided a focal-point for wider redevelopments, whose various strands have been coming together at different speeds, and with very different end-requirements. The concourse canopy, and the public realm around its perimeter, is the lynch-pin of the King's Cross Central masterplan.

Architectural and spatial clarity was therefore of critical importance on a site that has, for decades, been one of London's least attractive milieux. The position of the concourse makes it a key gateway not only to the station, but also to the impending 8 million sq ft of King's Cross Central's mixed-use development, which will take shape on land between King's Cross and St Pancras stations and beyond.

The concourse must also link two new public plazas – one between the two stations, the other between the south façade of King's Cross and the Euston Road. In other words, the western concourse must act not only as an efficient processor of travellers, but also as urban connective tissue. Which means this is exceptionally important civic architecture. This project is an example of high innovation achieved within interesting constraints – and the way the concourse spreads into the landscaping of the two plazas remains a critical issue.

Those constraints were apparent from the initial design stages, as we developed the competition-winning design in 1998. The effortless form of the concourse and canopy, engineered by Arup, is quite literally rooted in complexity. The detailed design took shape in consultation with site stakeholders and consultants who included Network Rail, London Underground, London Transport, English Heritage, the Borough of Camden, and a number of local stakeholders.

Put simply, the new concourse will sit on top of a layer-cake of Underground networks, and a new link to the forthcoming renewed station at St Pancras. And it will do so without compromising the elevations of the existing listed Western Range building, or the Great Northern Hotel, also by Cubitt.

Our design processes in larger urban projects are always founded on rational investigation of contextual issues, historic reference, and formal clarity – a search for architecture whose civic qualities are as energising and practically useful as possible. The layout and coverage of the western concourse will certainly make a glittering aesthetic statement; but its physical presence is ultimately the expression of an almost Victorian quest to demonstrate that pragmatism can give birth to riveting architectural beauty.

In developing the design of the western concourse, we have been acutely aware of the need for a structure that would express both civic aspiration, and obligation. The new concourse must not only serve many thousands of people a day, but provide vistas, amenities and a sense of space that is uplifting. It must have the opposite effect of King's Cross's current grimy, mean-spirited concourse. The new concourse and canopy will certainly be structurally innovative; but we also believe it will be a major innovation in the creation of public space, too. The retail and ticketing programmes of the concourse, and the way its mezzanine level carries passengers to and from the suburban and main train sheds, will lead to far more effective 'streaming' of travellers.

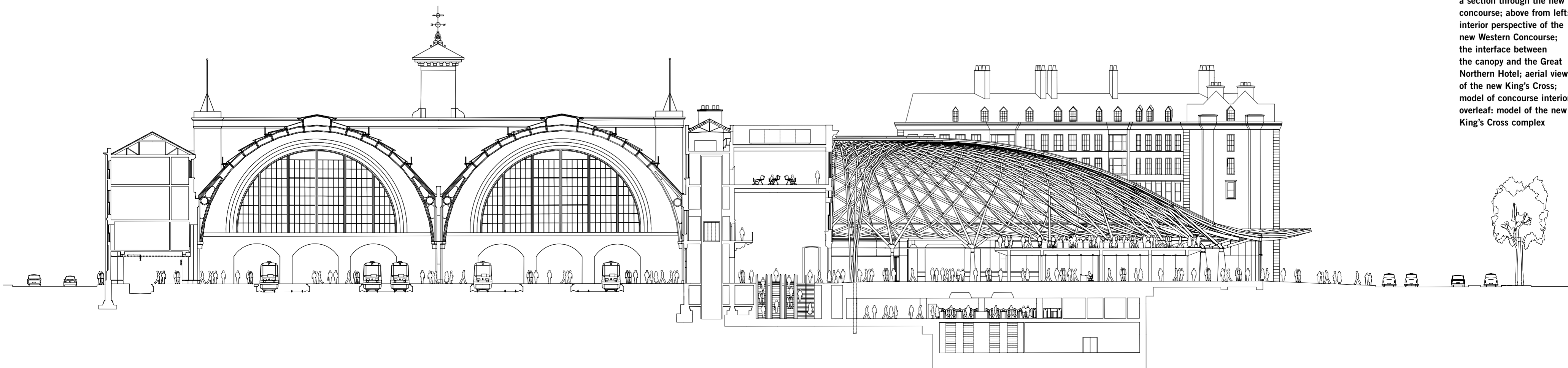
These innovations wouldn't have been possible without the encouragement of key players. English Heritage, for example, were very helpful in consultations about the considerable modernisations of the western range. And London Underground keenly supported our intention to deliver a big, column-free canopy. The result, an undulating diagrid frame, conceived by Arup's Cecil Balmond, is a genuinely 'lean machine' structure. Weight was a major issue here. And it was the constraint of the sub-surface structural grid of the Underground's ticket hall that suggested the fan-shaped canopy with its radial column arrangement.

The final design will therefore certainly deliver a sense of grandeur – an almost tidal flow of glass and steel – but not at the expense of human scale or the humane atmospherics of public spaces. The canopy falls gracefully from its 18m high point near the façade of the western range to a height of 6m at its perimeter. And so, the effect will be celebratory rather than physically overwhelming.

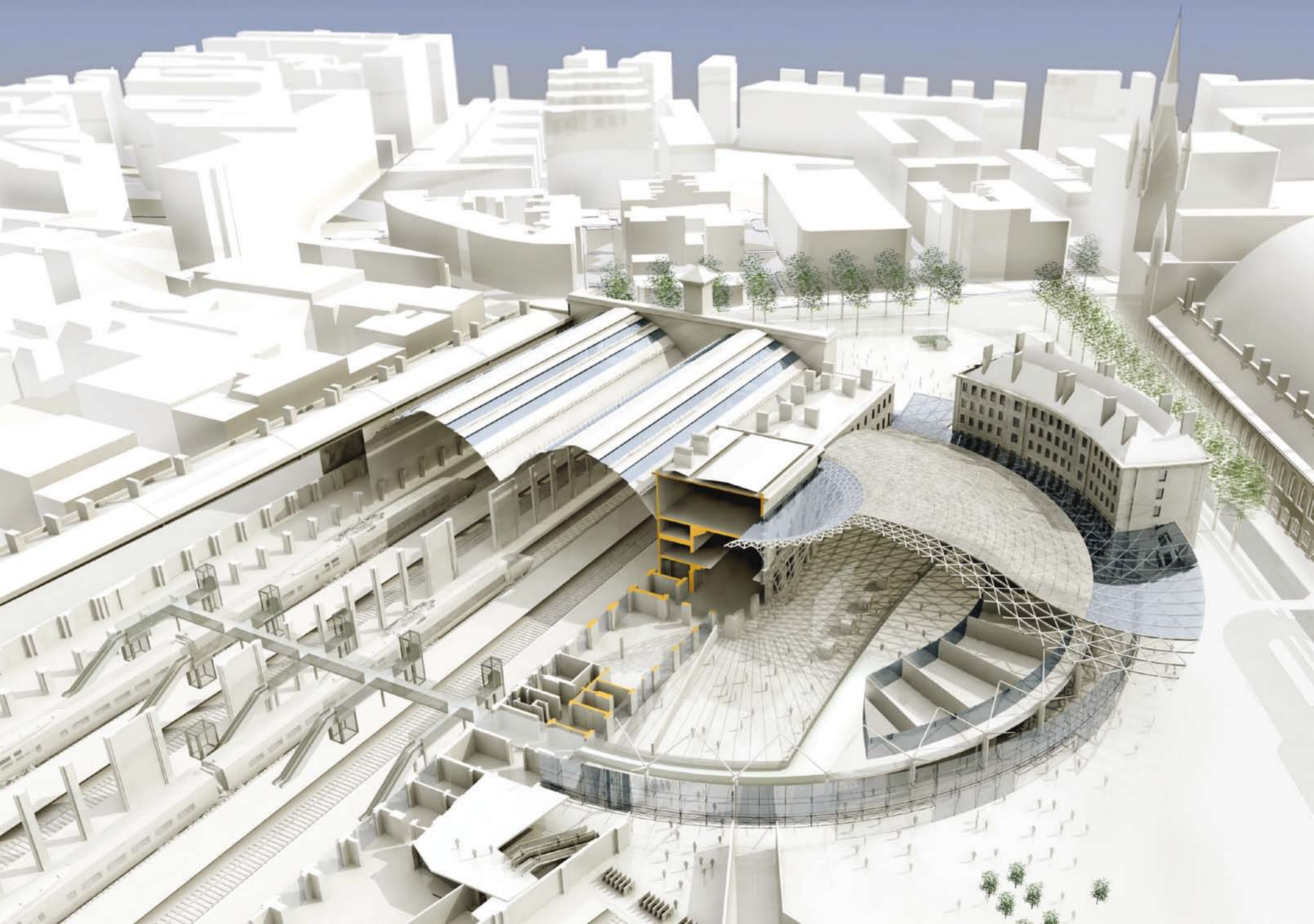
The canopy is also, of course, a bridge between the urban aspirations of the third millennium and those of the Victorians whose craftsmen built King's Cross Station and the Great Northern Hotel. The structure touches these two 19th century buildings lightly, and with greatest respect – and we have taken particular pleasure in this delightful expression of architectural continuity.

That important aura of continuity will become part of the daily experience of millions of travellers every year as they converge on, or flow outward from, King's Cross when the western concourse is completed in 2012. London's most depressing station will be the newest and brightest jewel in Network Rail's crown – a terminus that, for the first time in many decades, will radiate openness and delight.

The new concourse must not only serve hundreds of thousands of people a day, but provide vistas, amenities and a sense of space that is uplifting.



Previous page: the diagrid roof structure over the new Western concourse; below: a section through the new concourse; above from left: interior perspective of the new Western Concourse; the interface between the canopy and the Great Northern Hotel; aerial view of the new King's Cross; model of concourse interior; overleaf: model of the new King's Cross complex



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