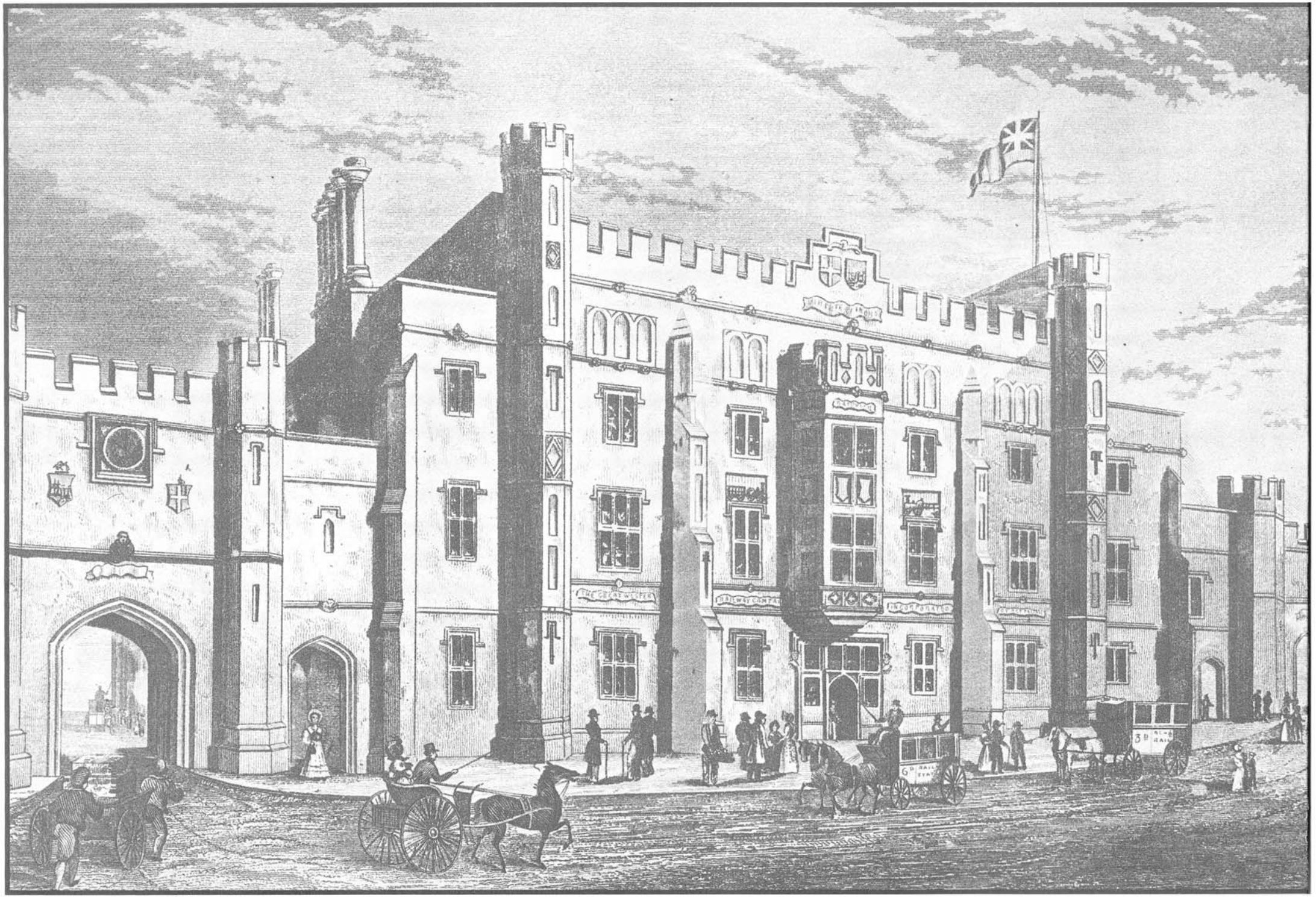
ASPECTS OF RAILWAY ARCHITECTURE



FORWARD

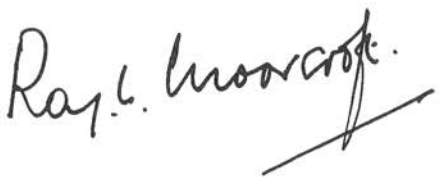
No author has so far produced a book dealing with the whole range of railway architecture, in all its fascinating variety. This publication should not in any sense be regarded as an attempt to fill that gap.

'Aspects of Railway Architecture' originated as an exhibition prepared in connection with the 150th Anniversary of the Royal Institute of British Architects in 1984. Because it was at first intended that the exhibition would appear only at York and Bristol, the railway structures of these two cities were featured in some detail, as was other work by the two men responsible for designing the earliest railway buildings at each. The comparison between their respective careers was complimented by a brief consideration of railway work by four other nineteenth-century architects, and by some examples of modern buildings and of conservation work carried out by my department.

For the remainder, it was thought that it would be interesting to abandon the usual classifications of chronology, architectural style, geographical location or company ownership. Instead, the illustrations were grouped according to the purpose for which the buildings were intended.

This diverse approach, truly merited the title 'Aspects of Railway Architecture', and has resulted in much favourable comment from visitors to the exhibition.

There have also been many requests for a permanent record of the exhibition. This booklet, which contains about 85 per cent of the illustrations featured in the displays, is the result, and I am most grateful to the Bristol Marketing Board for undertaking the publication.



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Chief Architect, British Railways Board

Errata:
Written and prepared by Linda Clarke, John Ives, Stuart Rankin and Paul Simons.

Front cover: Cubitt's Kings Cross Station *NRM*, **Opposite:** The Original Bristol Station *CB*

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Opposite: Derby Roundhouse *NRM*

ASPECTS

In the early days of railways, there was no architectural style which could be recognised as purely 'railway' in character.

With a few notable exceptions, where neo-classical, gothic or even Moorish grandeur was intended to reassure nervous passengers or impress prospective investors, the first railway buildings would not have looked out of place in the high street of any small country town. Modest in size, using vernacular materials and styles, they were plainly adaptations of existing building types, with speed and economy of construction major considerations in their design. Thus, variations of the country estate 'Gatekeeper's Cottage' served for small stations; larger stations were first cousins of the Georgian coaching inn and early loco sheds were conceived as 'stables' for the 'Iron Horse'.

Buildings instantly recognisable as for 'railway' purposes, and nothing else, evolved rapidly during the 1840s under the combined pressures of a largely unforeseen, almost explosive, growth in passenger and freight traffic this was coupled with a need to build even faster and cheaper, engendered by the financial crisis in the railway money markets during the decade.

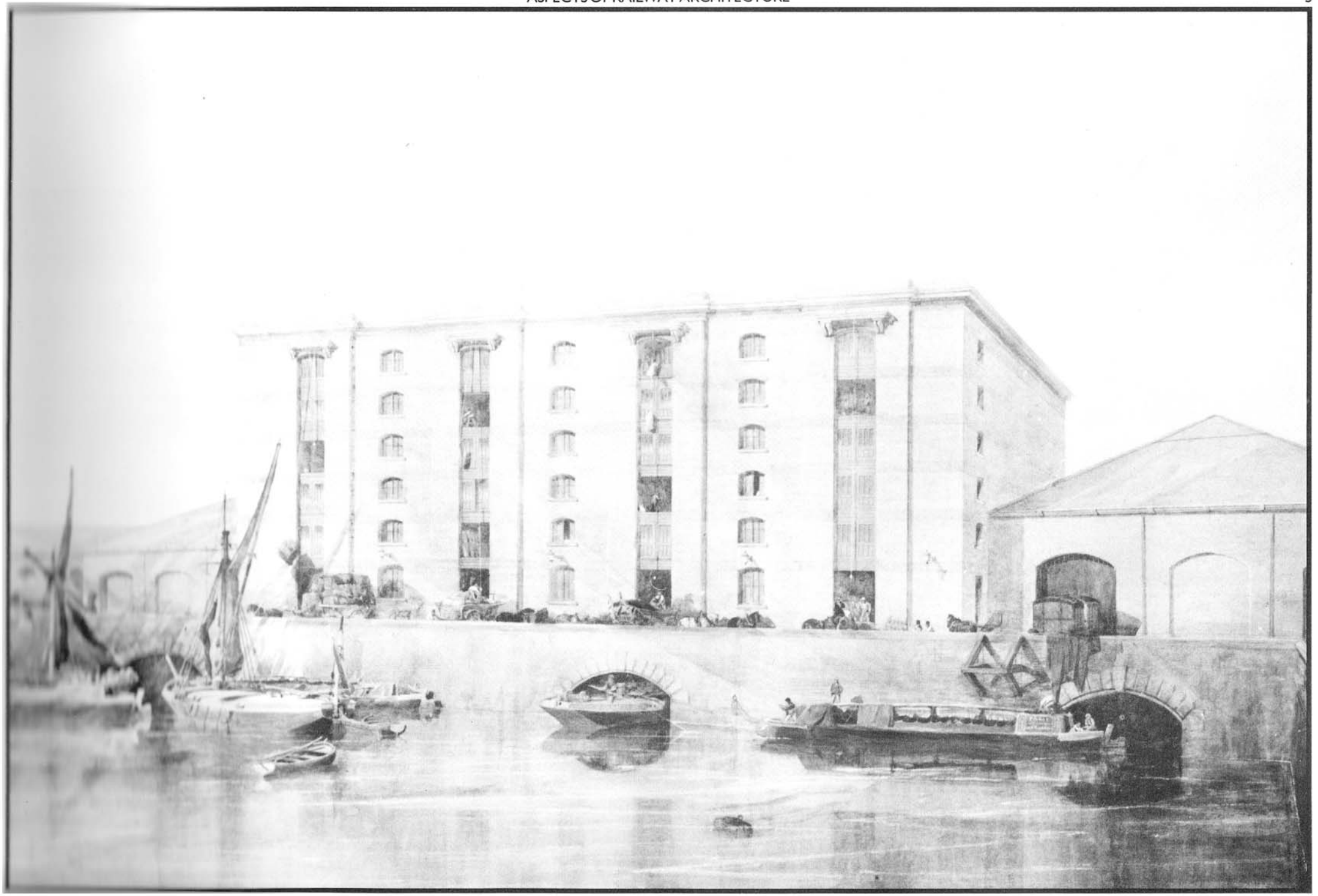
Other than for important stations, vernacular materials all but disappeared from railway use by the 1880s and 1890s—as indeed they did from contemporary domestic buildings. Cheap railway transport made the combination of Welsh slate and Midlands brick virtually unbeatable on grounds of economy, ease of use and durability.

In the 1920s and 1930s the 'Big Four' railways were all short of money, but embraced contemporary architectural styles with varying degrees of success. The best railway buildings of the period were excellent; others slightly comic, like concrete versions of the plywood or bakelite radio cabinets then fashionable; some were frankly horrible, pre-figuring the reinforced bunkers and block-houses shortly to be scattered throughout occupied Europe. Brave experiments were carried out with system building, and slightly odd materials like vitreous enamel.

After the Second World War, arrears of maintenance and repair of bomb damage prevented much in the way of adventurous new building from taking place, but by the 1960s and 1970s many imaginative rebuilding projects were under-way, together with some significant 'fresh starts' on completely new sites.

With money again in short supply during the 1980s, and an increased awareness of British Rail's architectural heritage, the emphasis has shifted, once more, to schemes which blend the best of the old, with the best of the new....

Opposite: Kings Cross Goods Warehouse *NRM*



PASSENGERS

The words 'railway station' conjure up powerful mental images—often the result of childhood memories.

For some they will mean the lofty smoke-filled vault of a major terminus; for others the flower-bed-scented expectancy of waiting for a train at a tiny and immaculate country station. Between these extremes, passenger stations have been built in a bewildering variety of shapes, sizes, architectural styles and materials.

Why was this so, when the basic function of the buildings was the same—to provide accommodation for passengers joining or leaving trains? Obviously a major consideration was the number of passengers expected to use the station. Many early railway companies grossly underestimated the traffic which their lines would engender. Consequently, some small, but impressive, early termini were proved totally inadequate within a few years, and had to be replaced.

Available sites also imposed constraints. At the beginning of the railway age, many municipal authorities regarded an approaching railway line with the kind of horror usually reserved for outbreaks of cholera. Despite the extensive powers of compulsory purchase enjoyed by railway companies, civic opposition often imposed the use of difficult sites, remote from town centres.

In consequence, those stations had to be imposing, reassuring, and provide essential facilities for customer comfort, which might at that time be lacking in the less salubrious parts of town. Sometimes this was done at the expense of more essential demands like safety or staff welfare.

By the late 1840s the railways had deservedly become the focus of much adverse comment—so much so that government had begun to impose stiff regulations regarding safety, even taking provisional powers to nationalise the network, with a threat that these would be invoked if things did not improve.

Breakdowns, accidents and fatalities were frequent. Speculation in railway shares had almost wrecked the National economy; while a series of financial scandals, culminating in the Hudson affair, demonstrated that some men in control of the railways should not have been trusted with custody of the proverbial whelk-stall....

King's Cross (cover), epitomises the railway mood in mid-nineteenth-century England; functional, sturdy—an expression of confidence, after a shaky start, from an industry which knows where it is going....

For many people, their first experience of railways was at a local station—meeting relatives, going away on holiday, or on a shopping trip to a nearby city.

Cromford Station on the Midland Railway, with an up express thundering through, photographed on 15 June 1911, stands as an archetype for the kind of scene which most of us think we can remember from childhood days before the diesels came . . . . even if it was never quite like that....

Opposite: Cromford Station *NRM*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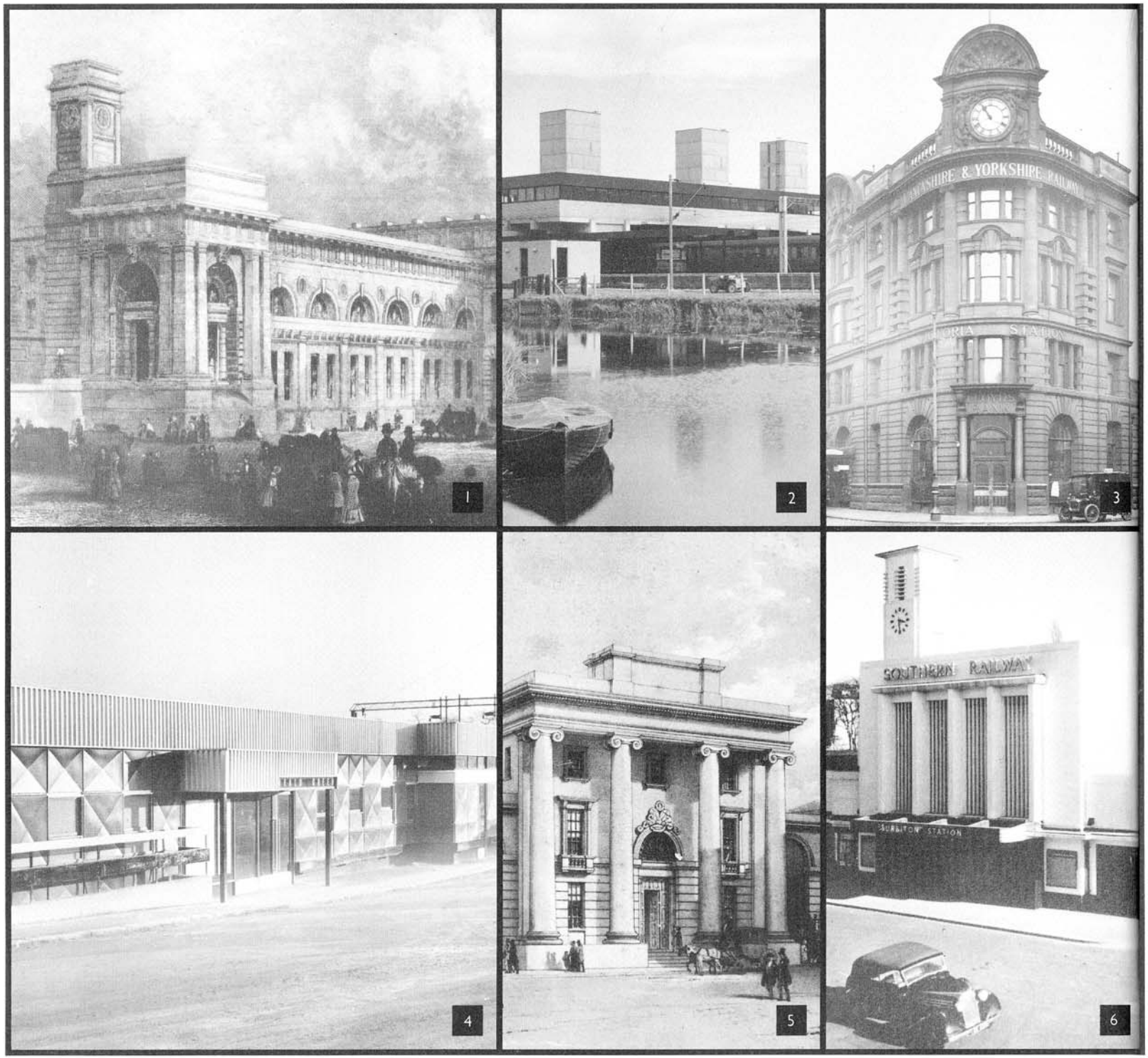
M R

The original design for the frontage of Newcastle Central Station is almost contemporary with King's Cross. Never built in this form, it was a casualty of the financial troubles which hit the Hudson-dominated companies of the North-East, and of the need for more office accommodation to administer an increasingly complex business.

The London and Birmingham, planned in the 1830s, had started a fashion for 'Grand Entrances' at Euston, and with a small structure—ionic rather than doric—at Curzon Street. By the end of the century, principal stations of major companies were usually accompanied by substantial office blocks, as at Manchester Victoria. The 1920s and 1930s saw a major break away from 'traditional' materials and railway architecture, as at Surbiton and Margate, which has continued up to the present day.

Bricklayers Arms and Shoreditch were soon outgrown by the growth in traffic, and superseded. Broad Street, with awkward flights of steps to the booking hall, seems to have been designed with little thought for the convenience of passengers, while the former L.N.W.R. station at Oxford is typical of many cases where a railway 'invaded' the territory of an established company—and used an early form of prefabricated construction to open for business quickly. Huddersfield represents an unusual contribution by the railways in the field of town planning, where the station was conceived as part of an architecturally distinguished square.



1. Newcastle *BR*, **2**. Harlow *BR*, **3**. Manchester Victoria *NRM*, **4**. Heald Green *BR*, **5**. Curzon Street *NRM*, **6**. Surbiton *NRM*, **7**. Shoreditch *NRM*, **8**. Huddersfield *BR*, **9**. Bricklayer's Arms *NRM*, **10**. Oxford *NRM*, **11**. Broad Street *NRM*, **12**. Margate *NRM*


GREAT EASTERN RAILWAY
RICKETT, SMITH & Cº
MOORE &
EASTERN RAILWAY GOODS OFFICE
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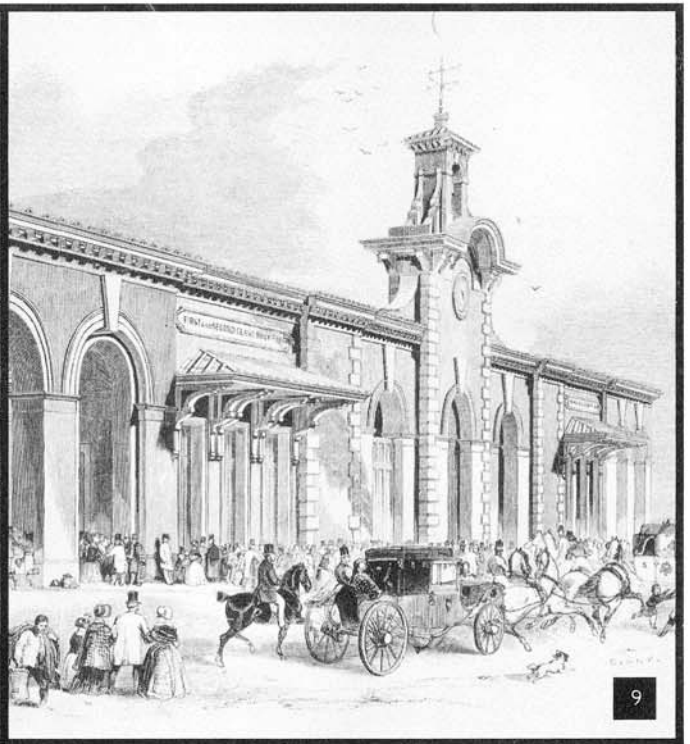
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LONDON MIDLAND & SCOTTISH RAILWAY
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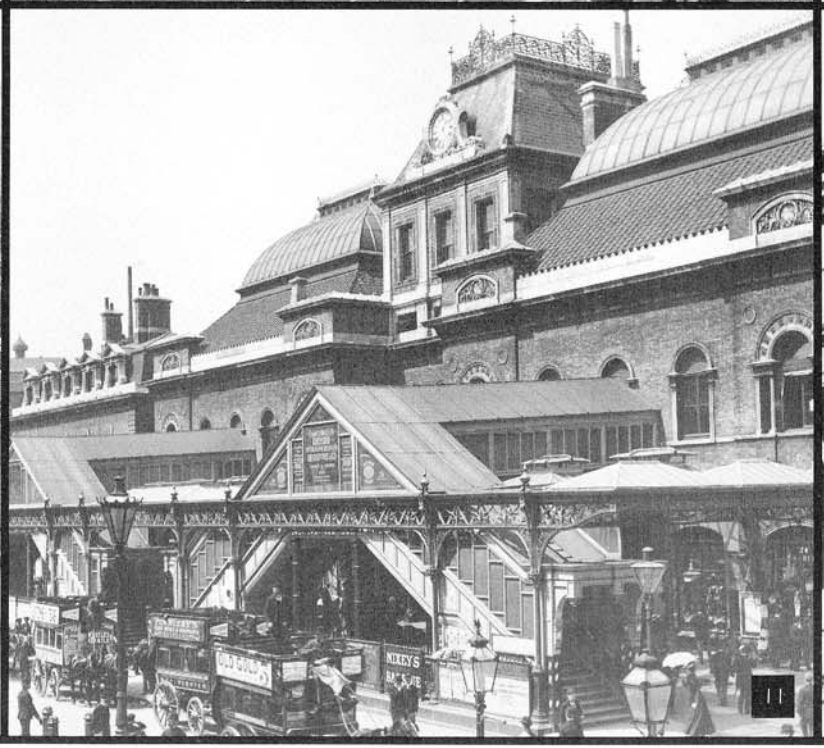
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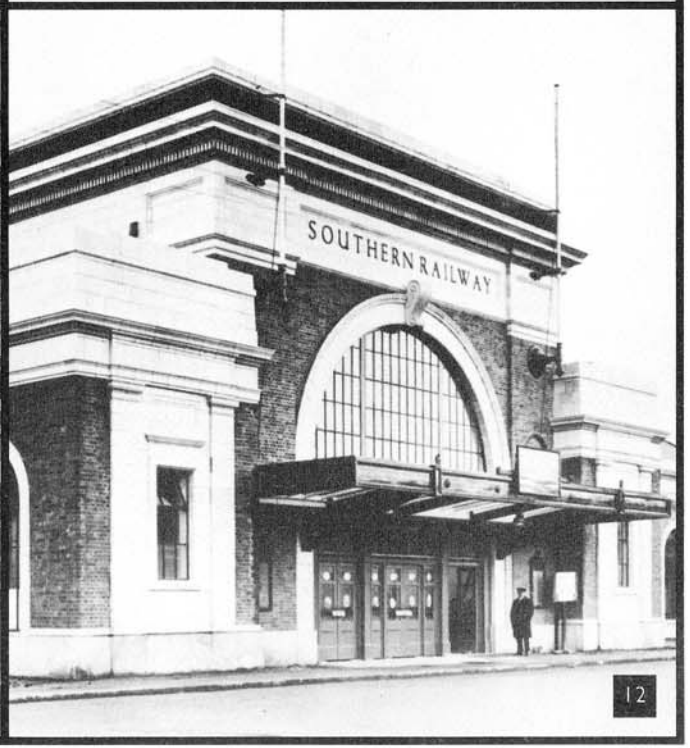
SOUTHERN RAILWAY
12

Behind station façades one might find a train shed. These could be veritable 'cathedrals' of the railway age like Paddington, or at least substantial 'parish churches' like Brighton or London Bridge. On the other hand, there might be more literally a 'shed'—perhaps more suited to merchandise than passengers, with a roof too low for adequate dispersal of smoke and steam. Broad Street perhaps only just escapes this category.

Possibly the most striking feature of Victorian railway architecture was the use of cast and wrought iron, later of steel, for roofs and awnings. Even the smaller stations like Brighton or Marylebone could incorporate interesting and quite elaborate examples, while the composition of curves in the staircase and roofs at Stirling is particularly satisfying.

The modern use of steel trusses provides a more severe style, as at Bradford Interchange and Gatwick Airport. However, their impact is sometimes softened, as at the rebuilt London Bridge, where the trusses are intersected at an angle by a curved glass screen. With the disappearance of steam locomotives, it was possible to make modern station roofs much lower than their predecessors, and up-to-date construction techniques require fewer intermediate supports. The result may not be as grand as Paddington but can be visually very striking.


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1. London Bridge *NRM*, **2**. Broad Street *NRM*, **3**. Brighton *BR*, **4**. Paddington *NRM*, **5**. Marylebone *NRM*, **6**. Bradford *BR*, **7**. Gatwick *BR*, **8**. Stirling Dr W Fawcett, **9**. London Bridge *BR*, **10**. Brighton *NRM*

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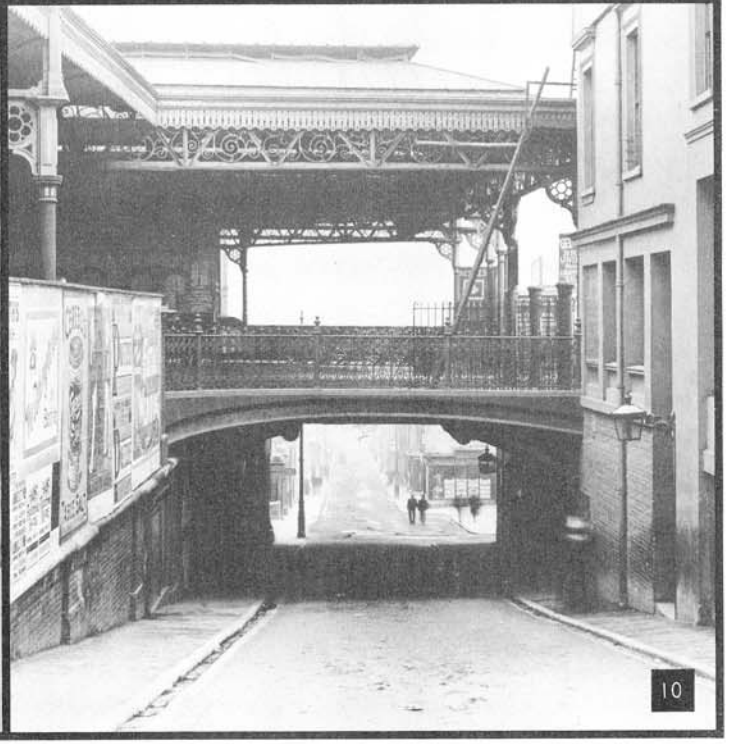
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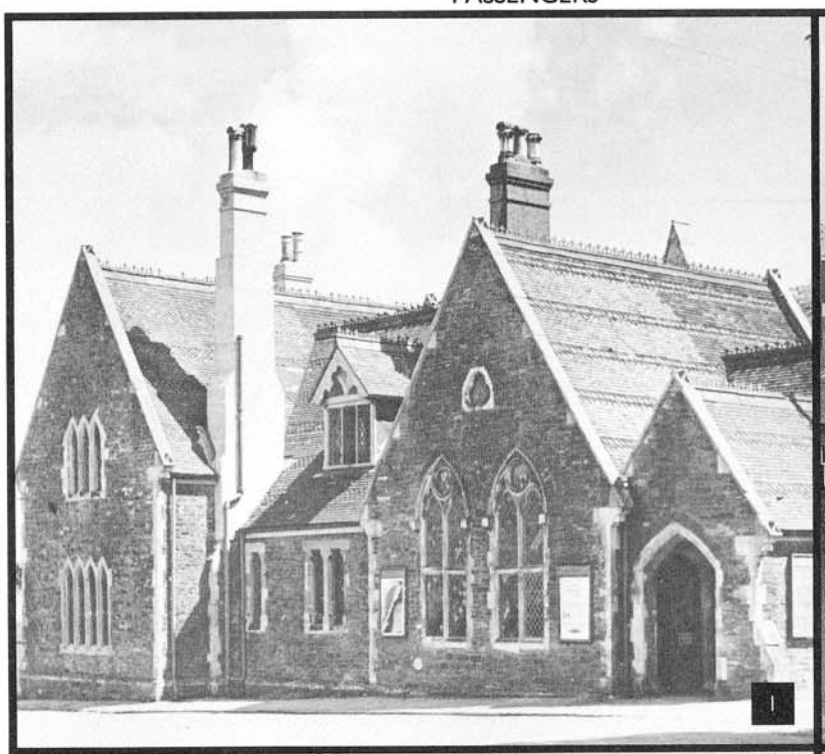
Many local stations were, and are, quite delightful buildings, even if the station master might have found himself trying to bring up a growing family in some very oddly shaped rooms. The inclusion of living accommodation was of necessity, a feature of local stations from an early date. Its disappearance is one of the major differences between small stations designed say, before the First World War, and those built since. A reluctance to live in tied housing, linked to a specific job, coupled with desire to own or rent a home which could be occupied after retirement, gradually spread through all grades of railway employees.

Local stations might serve fairly large towns or small, remote villages like St. Fillans (pop. 160 when the station closed in 1951). Some changed from serving rural communities to become commuter railheads. Most had little money spent on them once they had opened, unless major changes in population, or railway traffic made it necessary, as at Pilmoor where widening the L.N.E.R. main line caused demolition of the existing buildings. The L.N.W.R. platform shelter at Disley utilised standard components and could be regarded as an early example of system building, while Monkseaton was an aggressive, almost self-conscious attempt to be 'modern' and attract passengers in the 1930s. The thinking behind the design of Maldon Manor, at much greater expense, was similar. From the 1960s onwards, some completely new stations, like New Pudsey, have been built to provide the 'park-and-ride' facilities for motorists; the willingness of some local authorities to invest in rail services has resulted in the provision of new stations, or the re-opening of old ones (Watton at Stone).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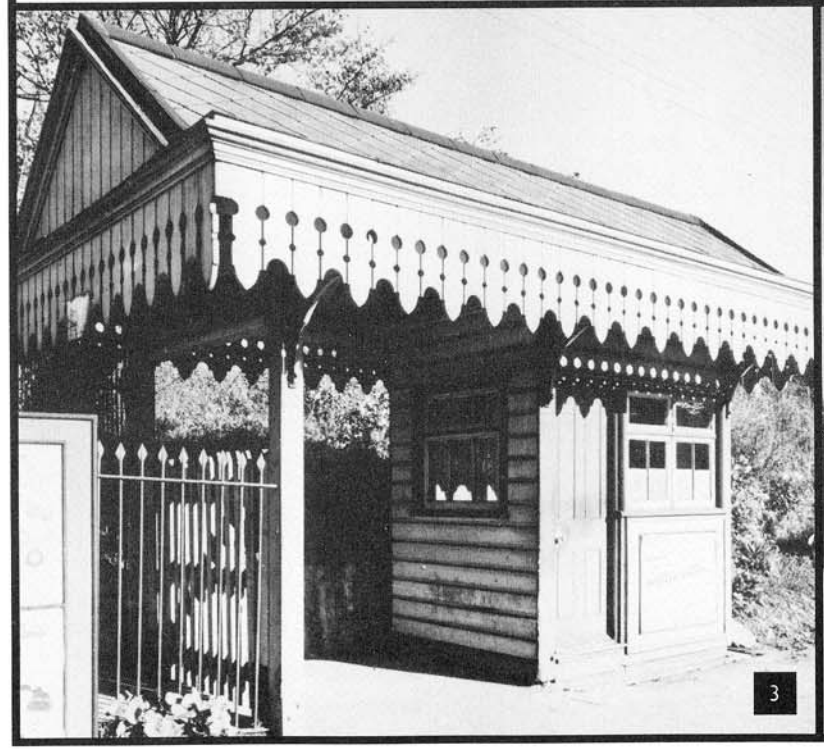
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1. Battle *NRM*, **2**. Golspie *Dr W Fawcett*, **3**. Leigh-on-Sea *NRM*, **4**. Watton at Stone *BR*, **5**. Malden Manor *NRM*, **6**. Disley *NRM*, **7**. St Fillians *NRM*, **8**. Pilmoor *BR*, **9**. West Monkseaton *BR*, **10**. New Pudsey *BR*


SOUTHERN RAILWAY
MALDEN MANOR STATION
5


LEWIS'S
CHRISTMAS
BRYLCREEM
Elasto
6


7


8


9


British Rail
New Pudsey
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MOTIVE POWER

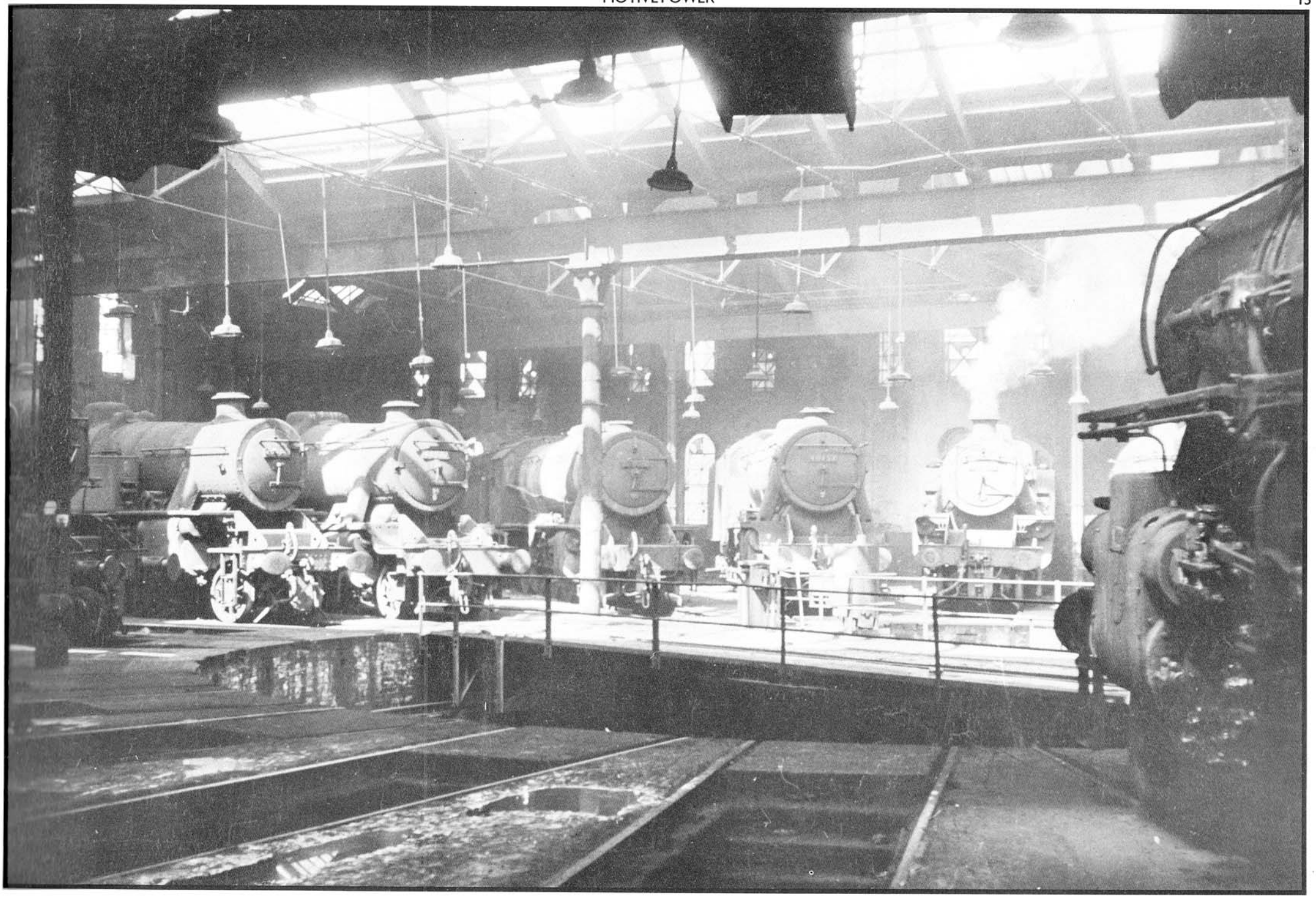
Early locomotive depots had their roots firmly in the horse-haulage era. They were often referred to as 'engine stables' contained 'stalls' allocated to individual locomotives, and were little more than scaled-up versions of contemporary agricultural buildings. The first major innovation was the introduction of the roundhouse, where a series of storage lines for engines radiated from a central turntable. In some examples, the turntable was open to the elements, and only standing locomotives were under shelter; smoke and steam found their way out as best they could. Later, particularly in rectangular sheds laid out internally with turntables and radiating lines, elaborate smoke troughs were provided. Obviously, although economical in land use, the roundhouse design had many defects; it could not be easily expanded to take larger locomotives, and an accident involving the turntable could effectively block all the other engines in.

The cleanliness and neatness evident in motive power depot photographs taken before the First World War was real, not staged; some locomotive superintendents made their tours of inspection wearing white cotton gloves. Oil or dirt stains on those gloves would bring forth at best, a stinging reprimand, and often harsher punishment.

Once the days of cheap labour had passed, motive-power depots became grimy, unromantic places to work in, not at all suited to the almost clinical conditions required for the adequate maintenance of modern locomotives.

In the 1960s old steam depots were eerie places: at Holbeck, it required little imagination to conure up the shades of anxious enginemen, expected to work the Midland Railway's under-powered locomotives over the 'Long Drag', consulting telegraph messages on the board headed "State of the weather at Crosby Garrett . . .'

Opposite: Leeds Holbeck *NRM*



As the size of steam locomotives increased, some roundhouses were rebuilt, or replaced by straight sheds, but the concept died hard, and, even in 1958, what was probably the last roundhouse to be built in Europe, opened at Thornaby. Guildford was a good example of how a segment of the roundhouse type could fit a restricted site.

Straight sheds were, on the whole, more versatile, and provided better accommodation for carrying out heavy repairs, but all steam depots required extensive ancillary facilities, like the coaling stage and ashpits shown at Millhouses. With the disappearance of steam locomotives, the train for moving passengers became increasingly a unit combining traction and passenger accommodation, rather than a separate engine and carriages. The straight shed, much elongated, became the standard design for maintaining everything from local diesel units to Inter City 125s; at the same time, new depots constructed from the 1960s onwards were designed to provide a clean and pleasant working environment.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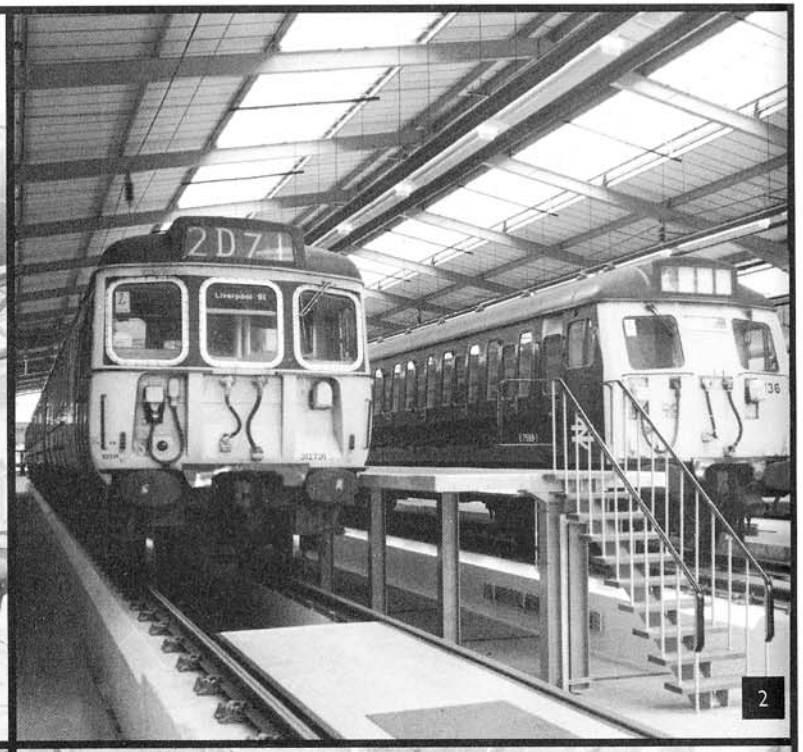

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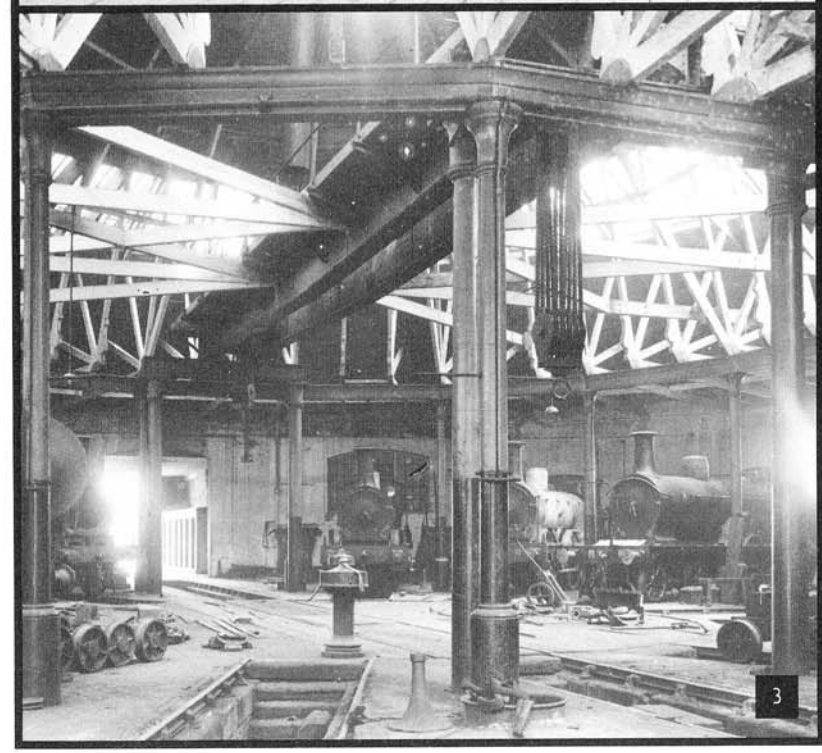
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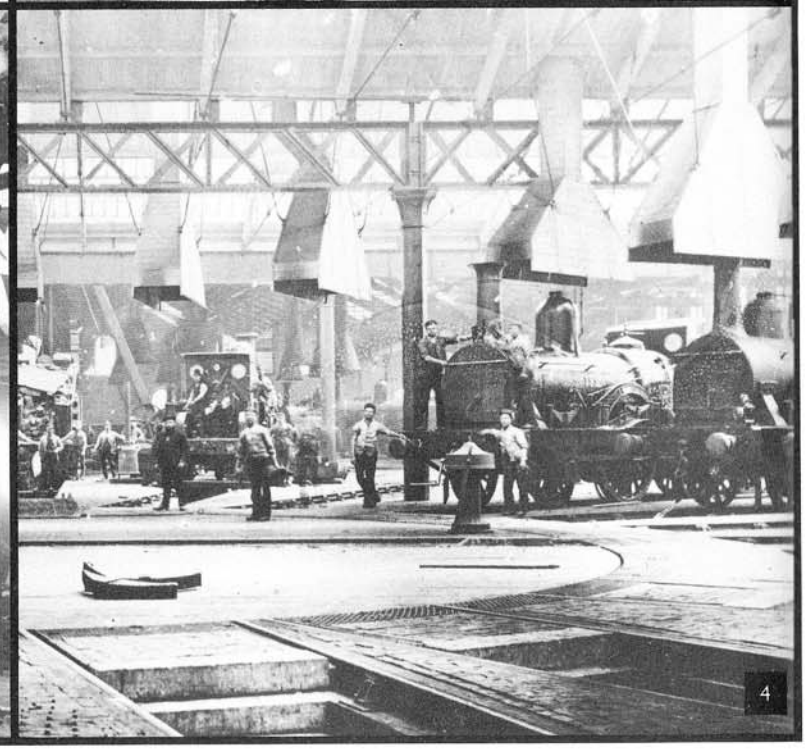
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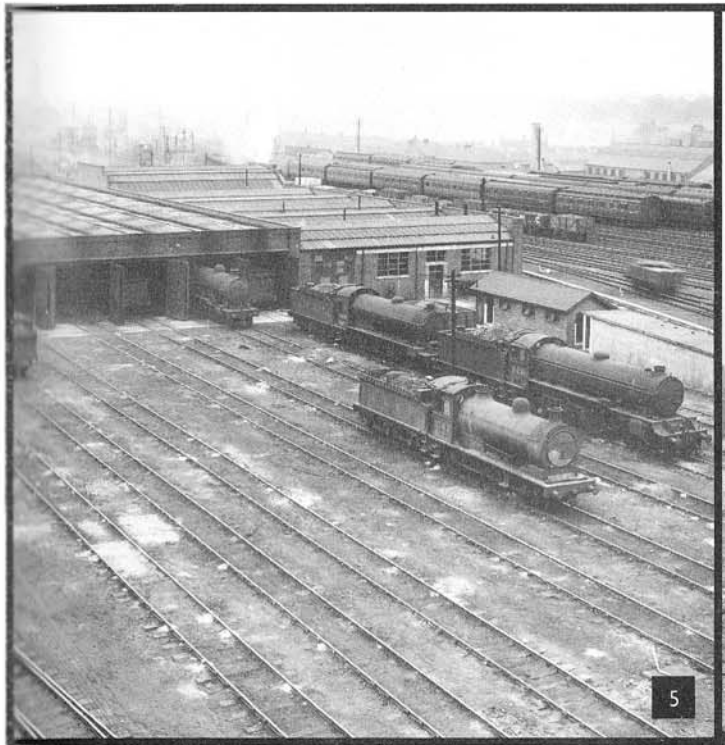
1. Old Oak Common *NRM*, **2.** Clacton EMU *BR*, **3.** Derby Roundhouse *NRM*, **4.** Saltley *NRM*, **5.** Darlington *BR*, **6.** Thornaby *BR*, **7.** Guildford *NRM*, **8.** Sheffield Millhouse *NRM*, **9.** Sheffield Millhouse *NRM*, **10.** Clacton EMU *BR*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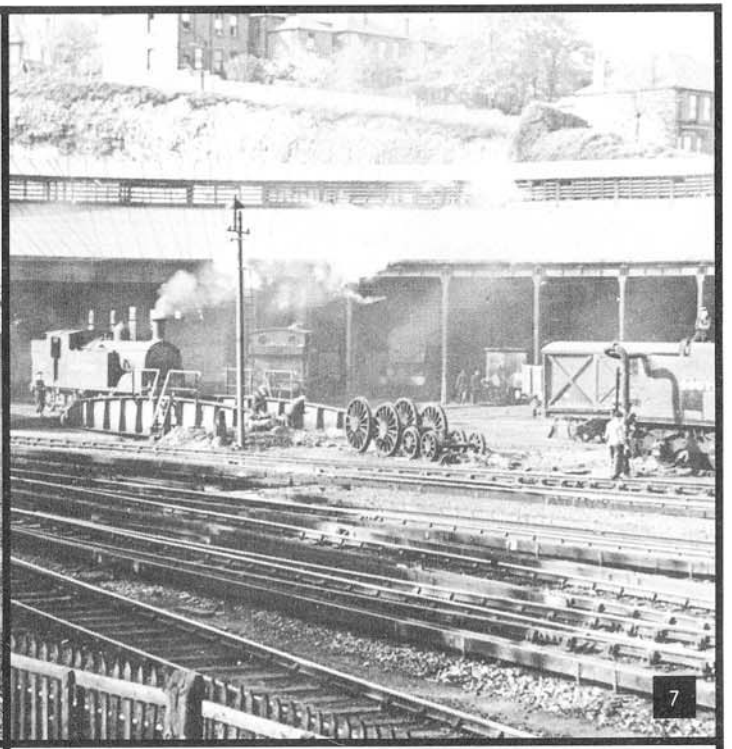
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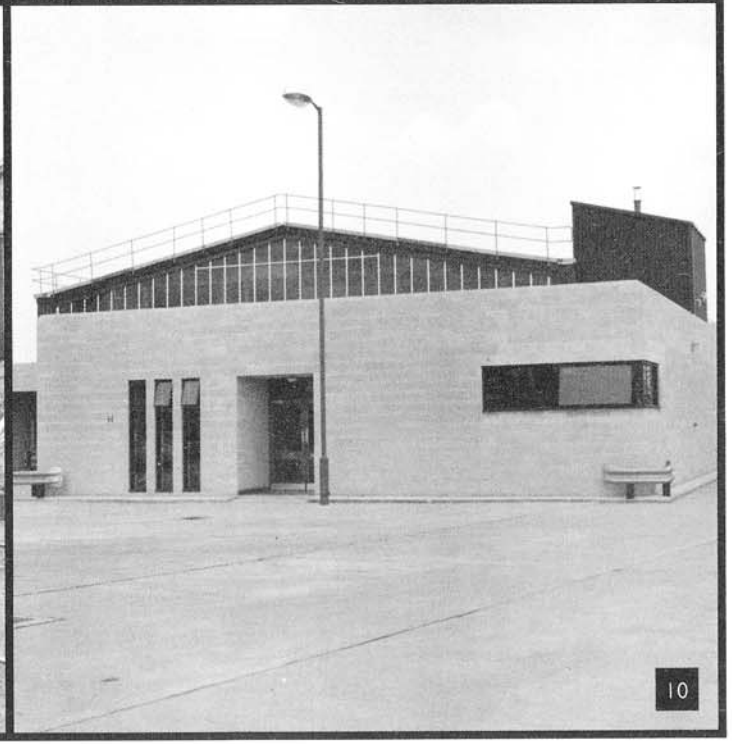
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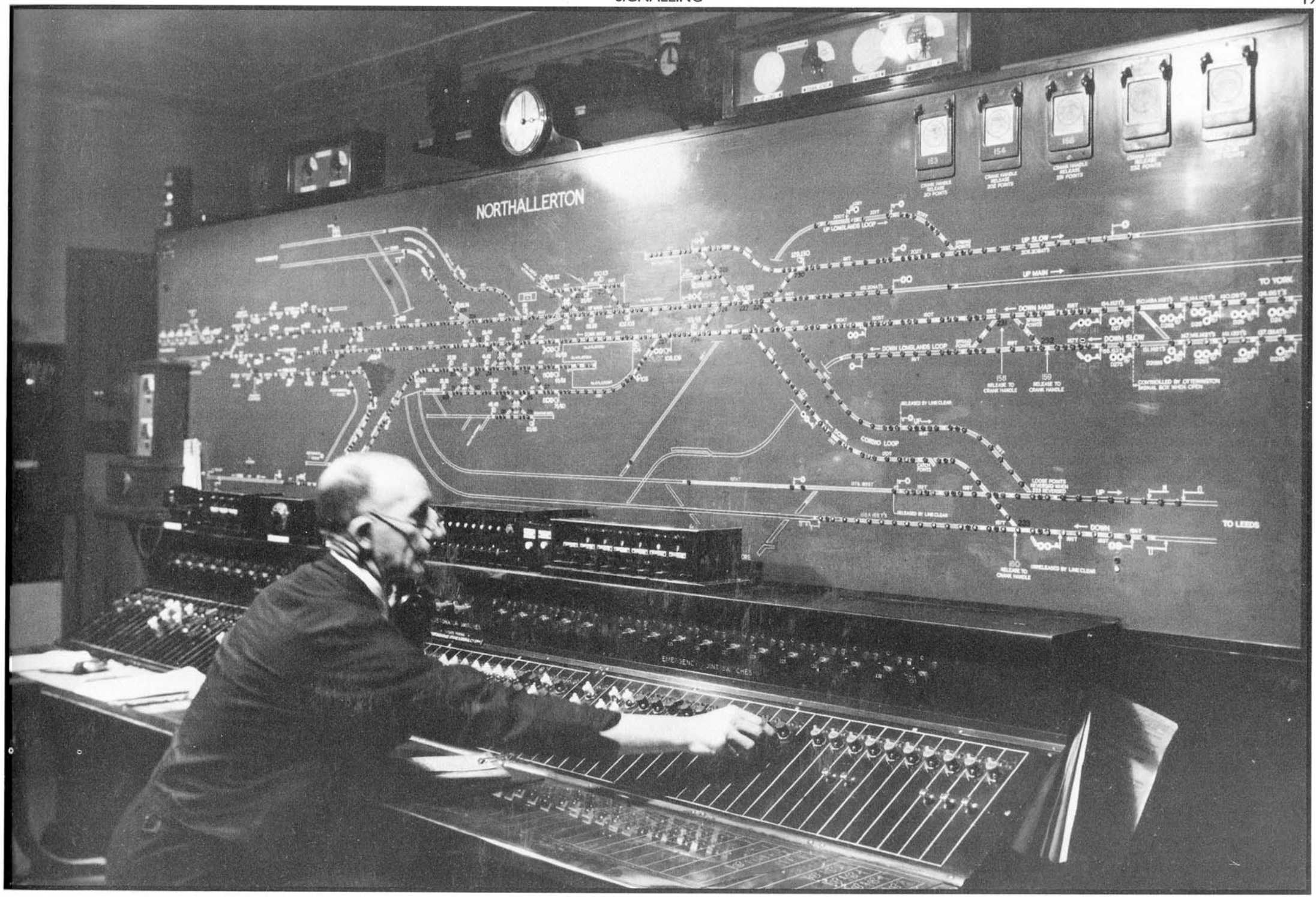
SIGNALLING

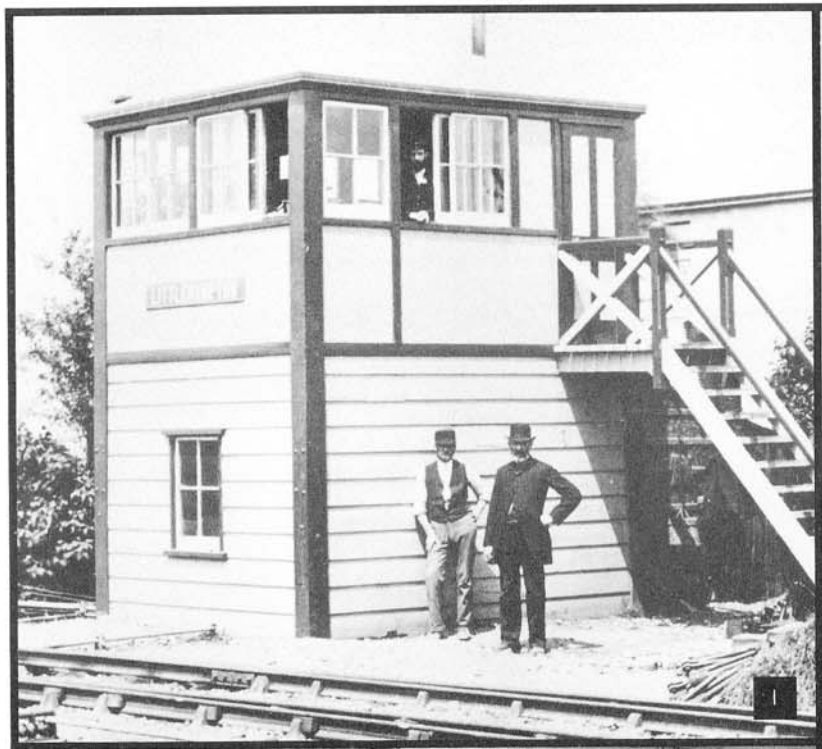
Signal boxes, as we came to know them, were comparatively late arrivals on the railway scene, and are of particular architectural interest, because they were designed to meet highly specialised needs; because of technical development, and the way in which these needs altered, the appearance of signal boxes and analogous buildings has perhaps altered more than any other railway structure during the past hundred years.

The first railway signals were usually operated individually by a man stationed at the base of their posts. If he was lucky, the railway company might provide him with a 'box'–like a sentry box–for shelter. It was soon found that by using levers, wires, pulleys and rodding, one man could operate several signals, or even points. A bigger box was obviously required to shelter the man, and more important by contemporary standards, the equipment. The major design consideration was that there should be a good view of the line and the signals in both directions. There matters rested for far too long, until some dreadful accidents made the government compel railway companies to adopt a 'fail-safe' system of signalling and train working, known as 'lock and block'. This required that telegraphs, signals, and points be interlocked in such a way that, provided signals were obeyed, the chances of accidents happening were greatly reduced. Virtually every signal box in the country had to be rebuilt, to Board of Trade specifications, still providing a good view, but with accommodation, usually at ground-floor level, for the interlocking apparatus. This is why many mechanical signal boxes dated from the 1880s or 1890s, and why despite company styles, or odd designs to suit odd locations, all bore a distinct family resemblance. This was to persist until the introduction of major colour-light signalling schemes between the wars, as at Northallerton, changed the design requirements yet again.

Opposite: Northallerton Signal Box Control Panel *BR*


NORTHALLERTON
UP LOWLANDS LOOP
UP SLOW
UP MAIN
TO YORK
DOWN MAIN
DOWN LOWLANDS LOOP
DOWN SLOW
158
RELEASE TO CRANE HANDLE
159
RELEASE TO CRANE HANDLE
CONTROLLED BY OTTERINGTON SIGNAL BOX WHEN OPEN
RELEASED BY LINE CLEAR
CORSO LOOP
LOOSE POINTS REVERSED WHEN NOT WORKED
UP
DOWN
TO LEEDS
160
RELEASE TO CRANE HANDLE
RELEASED BY LINE CLEAR

Before the First World War, the introduction of early power-operated signals and points had little effect on the external appearance of signal boxes. Inside, the difference was immediately apparent, because the old massive cast-iron locking frame, with its tall polished levers was replaced by a neat console as at Southport. The first colour-light signal installations required banks of huge relays, in rooms which were almost air-conditioned. Note the comparatively small size of the 'control room' at Northallerton, perched atop an almost window-less block containing all the electrical gear. The new design criteria coincided with the availability of new materials, which also played their part in changing the traditional 'signal box' look. Some of these buildings, and the marshalling yard control towers which appeared at the same time, were among the best examples of pre-Second World War railway architecture.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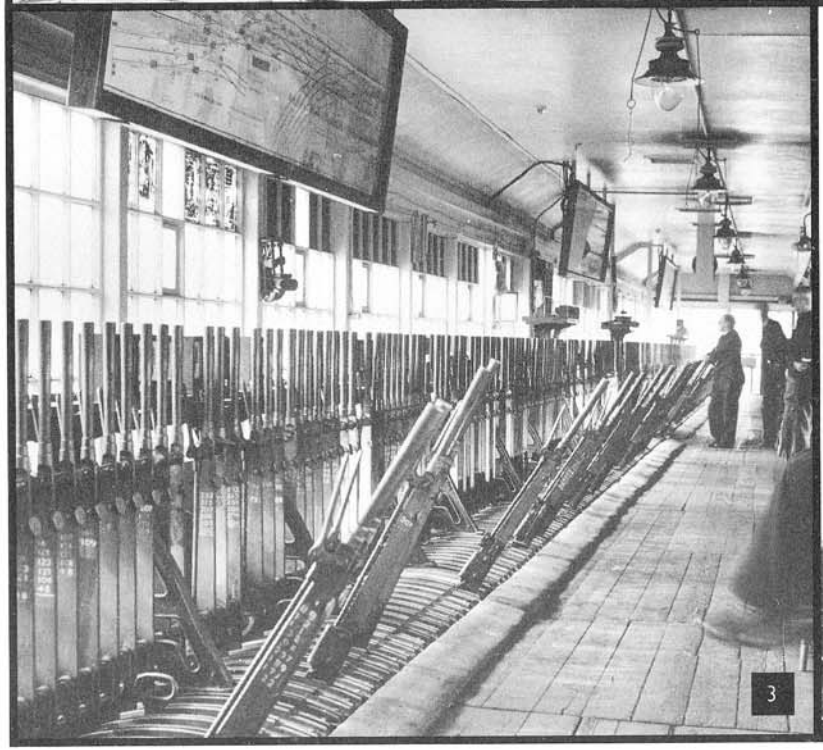
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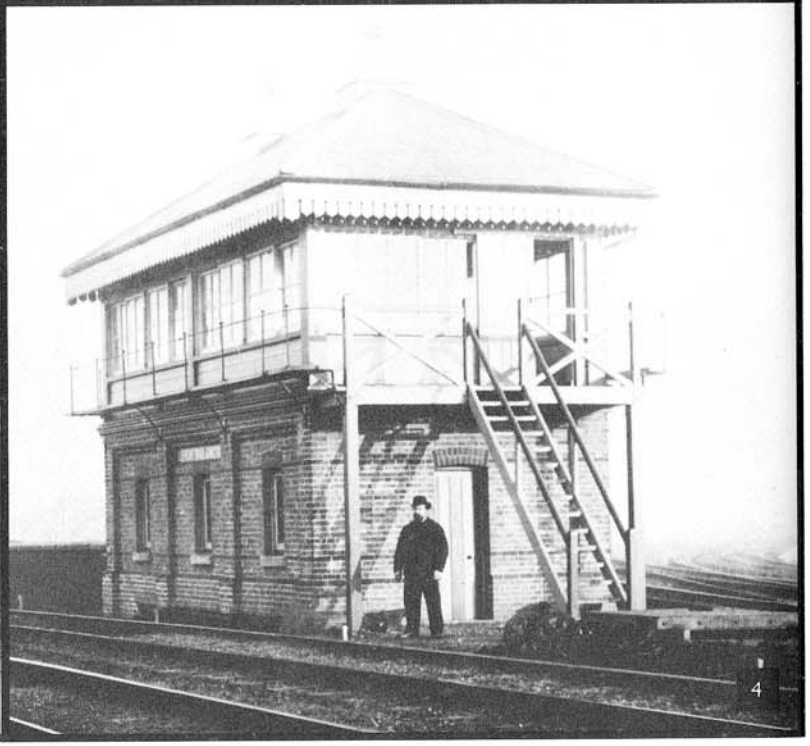
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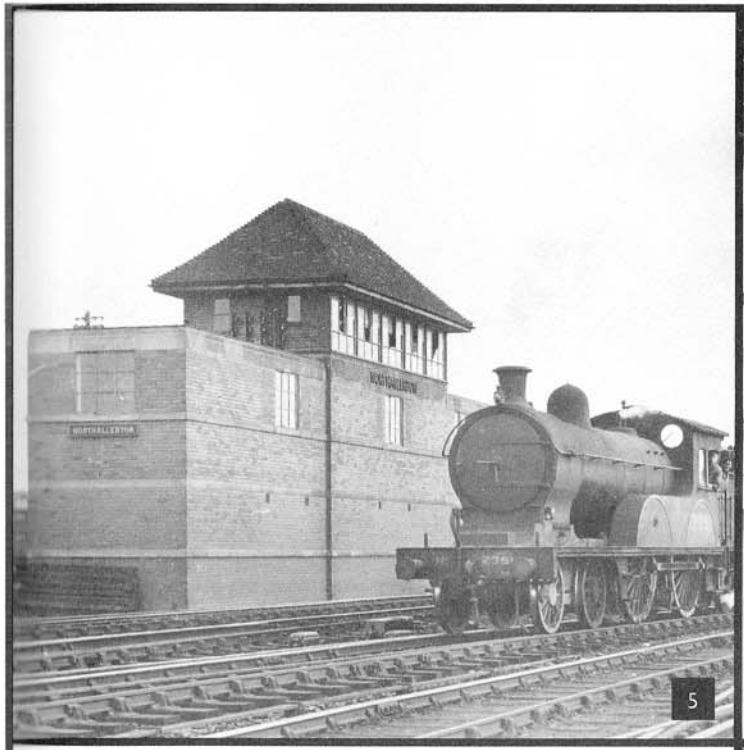
1. Littlehampton *NRM*, **2.** Springfield *BR*, **3.** York Locomotive *BR*, **4.** Kent Road Junction *NRM*, **5.** Northallerton *BR*, **6.** Southport *NRM*, **7.** Southport *NRM*, **8.** Waterloo *NRM*, **9.** Skelton *BR*, **10.** Tyne Yard *BR*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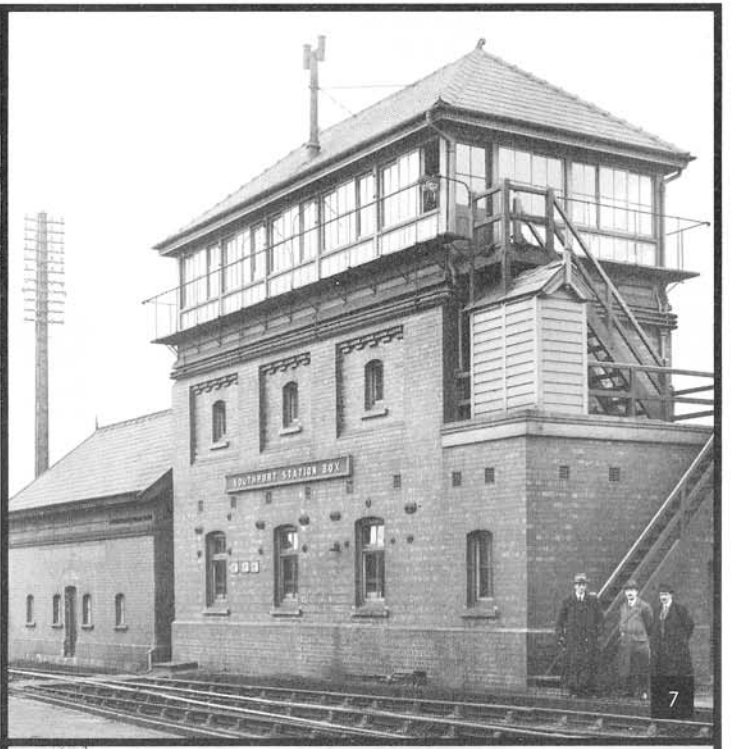

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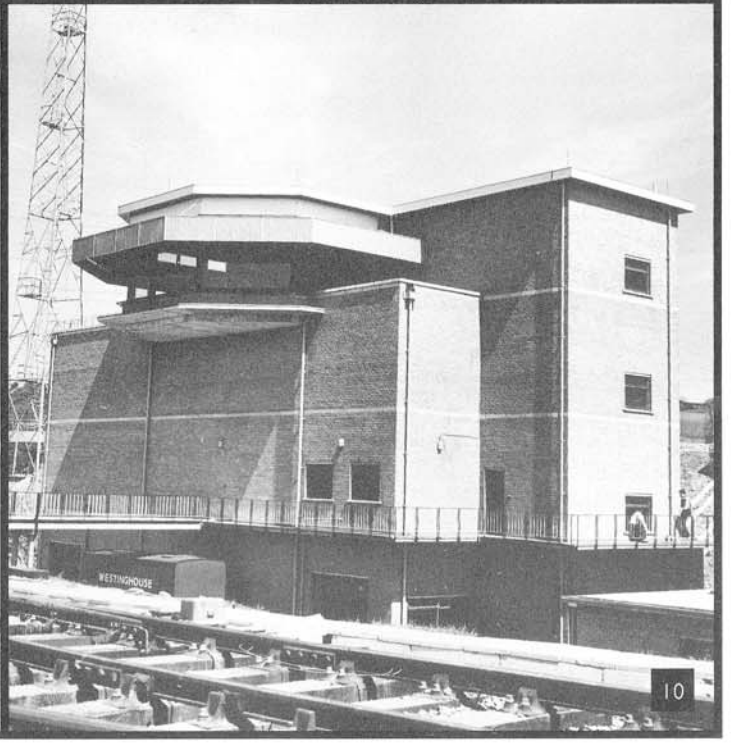

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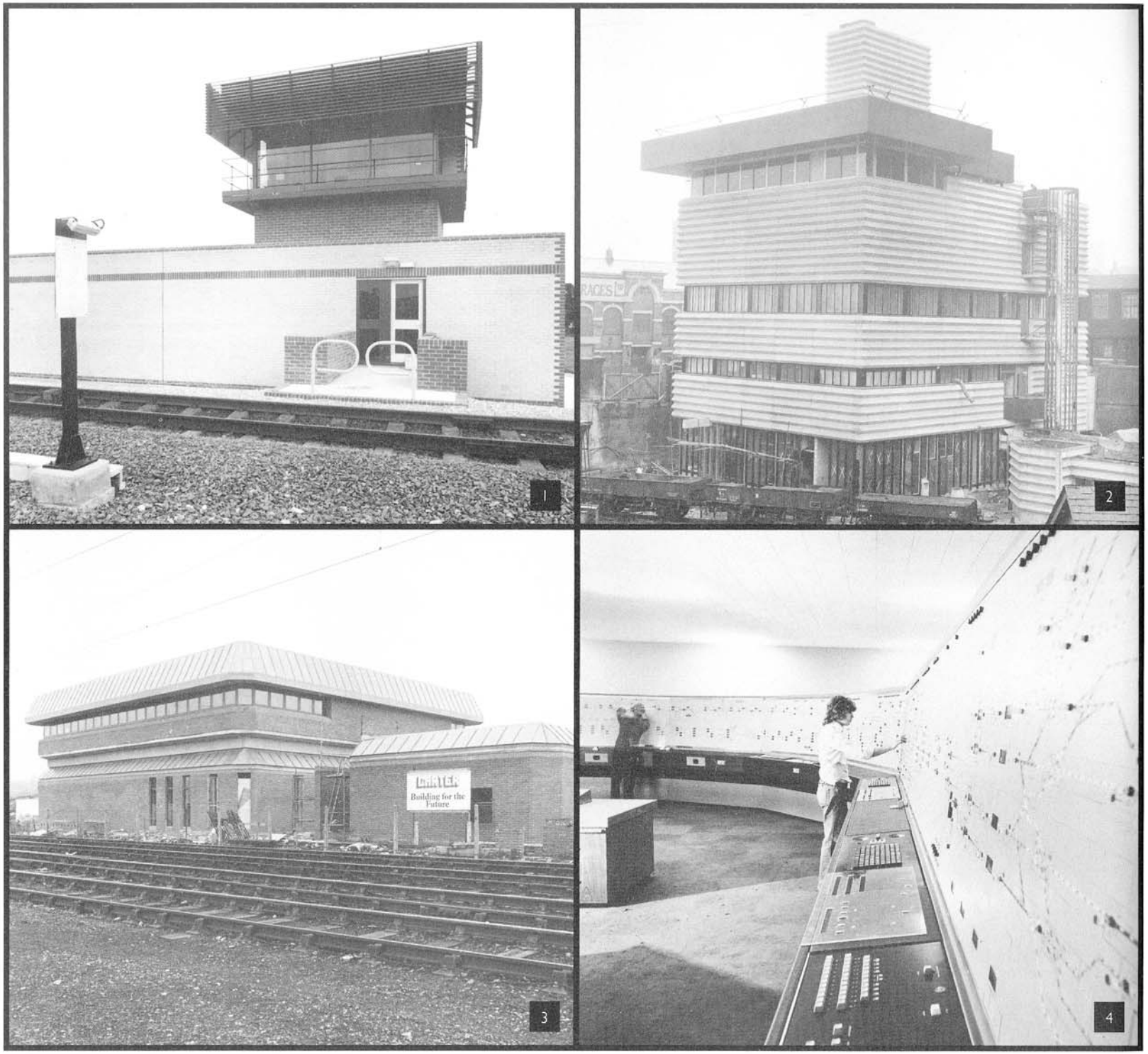
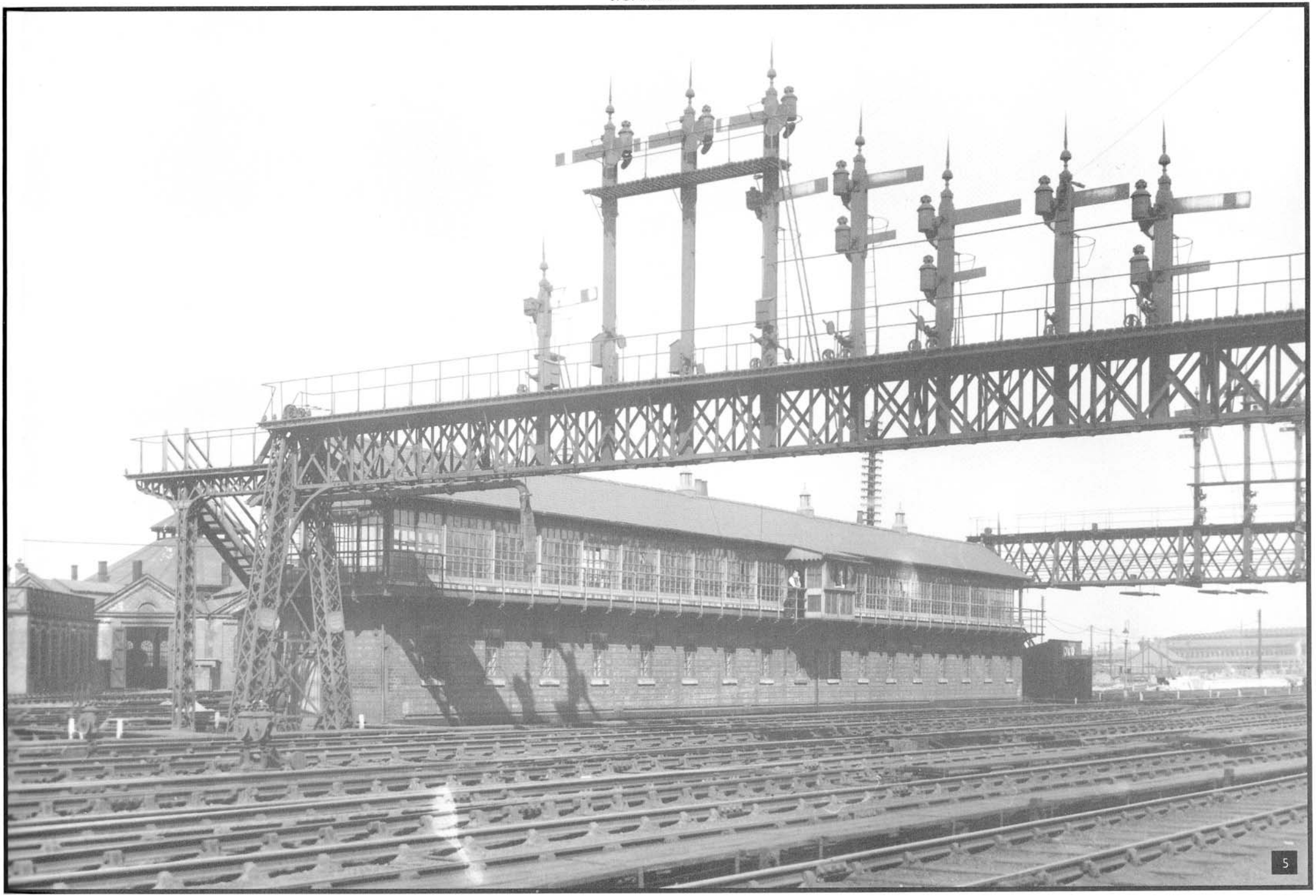
Advances in the science of electronics have meant that it is no longer necessary for signalmen to see the trains that they are controlling; windows in the modern equivalent of the signal box need only be provided to enhance the working environment of staff. For the same size of relay room provided 50 years ago to control just one station, sufficient electronics can now be accommodated to control hundreds of track-miles. The Army exercise staged at Skelton Box during the Second World War shows how many men were required to deal with train movements at one busy junction. The panel at King's Cross handles everything on the East Coast Main Line, up to the point where that at Peterborough takes over. And it does so with far fewer men.

Locomotive Yard Signal Box, at York represented the pinnacle of mechanical and signalling development, with a frame of 295 levers. It had a life of just over 40 years before being replaced by colour-light signals in 1951.



1. York Clifton *BR*, **2.** Birmingham New Street *BR*, **3.** Colchester *BR*, **4.** Kings Cross *BR*, **5.** York Signal Box *BR*



5

MERCHANDISING

The Goods Warehouse at King's Cross, shown on page 5, typified the main consideration in designing this class of railway building. They were primarily interchange points between rail and other forms of transport–in this case, road and canal.

Early goods depots had little in the way of storage facilities, and it was only when traffic began to increase, that the railway companies expanded their activities to provide a full distribution service, including warehousing, cartage, hire of sacks and even stocktaking. The design of many early railway warehouses was clearly influenced by similar buildings constructed for canals, docks, the Army or the Royal Navy in the late eighteenth or early nineteenth centuries. Some even bore a striking resemblance to contemporary prisons, but with the object of keeping thieves out, rather than thieves in. Kingston Street, Hull, was typical of a general goods depot, handling 'smalls' traffic–consignments of less than a full wagon load, which made part of their journey by road. The interior was laid out with broad cart roads and 'benches' to facilitate transhipment from rail vans, or wagons. Steam locomotives were not allowed inside sheds like this. Any shunting of individual vehicles which was required might be carried out using pinch bars, horses or hydraulic capstans and cables.

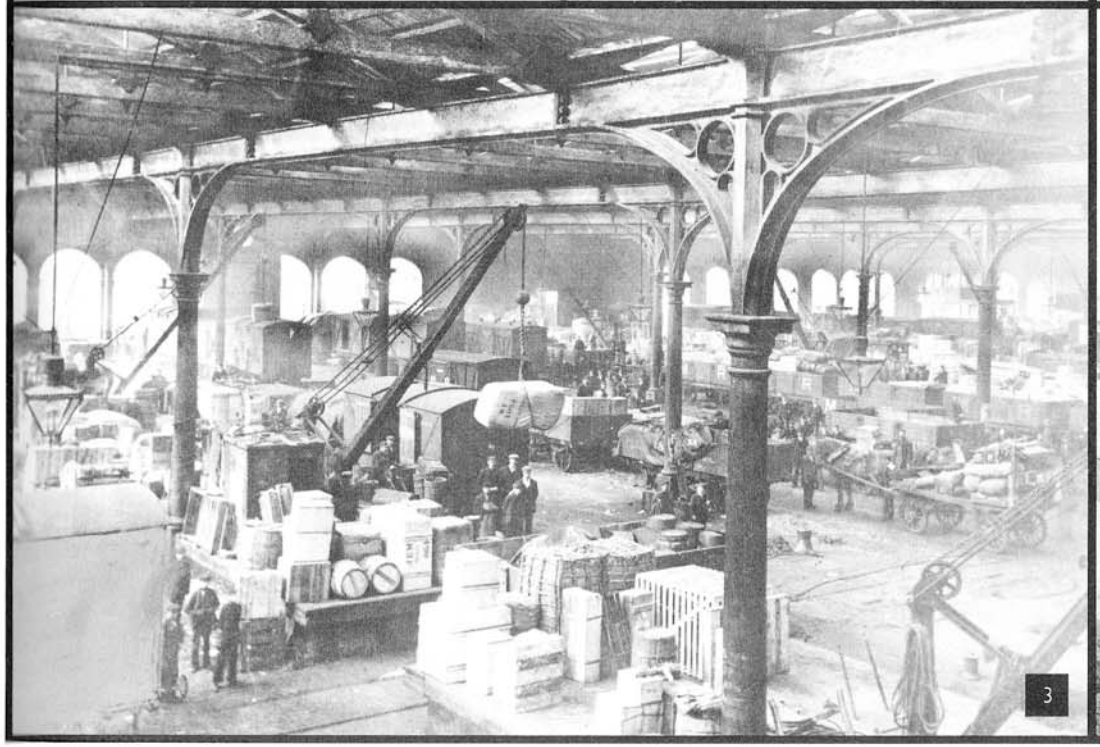
In places served by more than one railway company, the ability to offer a good cartage service to and from the depot was a major factor in attracting traffic, although the line of vans shown at Marylebone do not look very busy.

Grain often needed storage after harvest. The two Midland Railway warehouses were used for stockpiling grain in railway-owned sacks. Hoists inside the building carried the sacks to upper storage levels, whence they could be dispatched as required to road vehicles via external hoists in the gabled wooden structures. Such large buildings lent themselves to discreet advertising; in the case of Lawley Street, the signs were well placed to be seen by potential customers travelling by the rival London and North Western Railway....

1. Leicester Grain *NRM*, **2**. Marylebone *NRM*, **3**. Kingston Street *NRM*, **4**. Lawley Street *NRM*


MIDLAND RAILWAY
GOODS & GRAIN WAREHOUSE
MIDLAND RAILWAY
S AND GRAIN WAREHOUSE
1


GREAT CENTRAL RAILWAY
940
LINEHOUSE
DEPOT
GREAT CENTRAL RY
2


3


AND GRAIN WAREHOUSE
MIDLAND RAILWAY
4

Apart from simple cranes and hoists, movement of merchandise within the depots relied upon men and barrows, as seen at Hockley. The grim Caledonian Railway warehouse, functional but stark as a penitentiary, cannot be described as easy on the eye. On the other hand, Somers Town, just behind St. Pancras, displayed several attractive features, including the screen wall of glass in case-iron frames just above the cartage entrances.

New Bridge Street, Newcastle, although in L.N.E.R. ownership when photographed, was built by The North Eastern Railway; Ferro-Concrete was used extensively in its construction, in an attempt to make the building fire-resistant.

Helpston was a rather pleasant example of the many small depots once found at rural stations throughout the country. Not all merchandise travelled by goods train; parcels, and particularly perishable traffic, travelled in guards vans, in purpose-built vehicles attached to passenger trains, or even by 'specials', sometimes running to express train schedules. The carts and traps outside Clitheroe station are awaiting the arrival of the milk train.

Until the 1890s, goods trains had to be assembled or broken up in the cramped conditions of town centre yards. Gradually, strategically located 'marshalling yards' were developed, to maximise long-haul running of through-trains. This development continued into the 1960s with larger and better yards, like that at Tees, replacing groups of smaller ones. Some modern goods depots were built, as at Peterborough, but changing economics in the past 20 years have seen British Rail concentrate on two extremes of merchandise traffic—train loads and Red Star Parcels.

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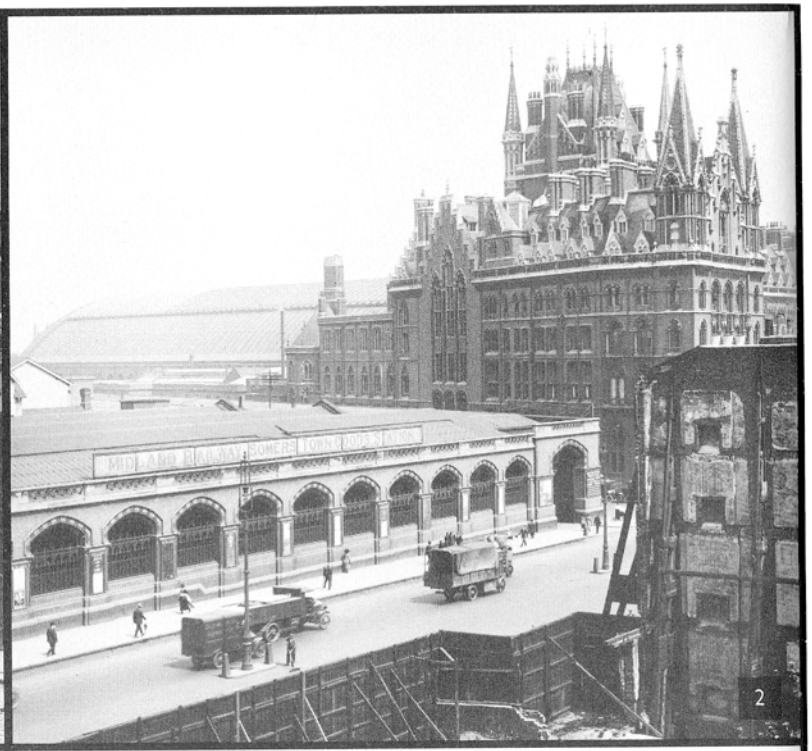
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1. Somers Town *NRM*, **2.** Somers Town *NRM*, **3.** Glasgow Buchanan Street *NRM*, **4.** New Bridge Street *BR*, **5.** Hockley *NRM*, **6.** Tees Yard *BR*, **7.** Helpston *G Biddle*, **8.** Newcastle *BR*, **9.** Peterborough *BR*, **10.** Clitheroe *G Biddle*


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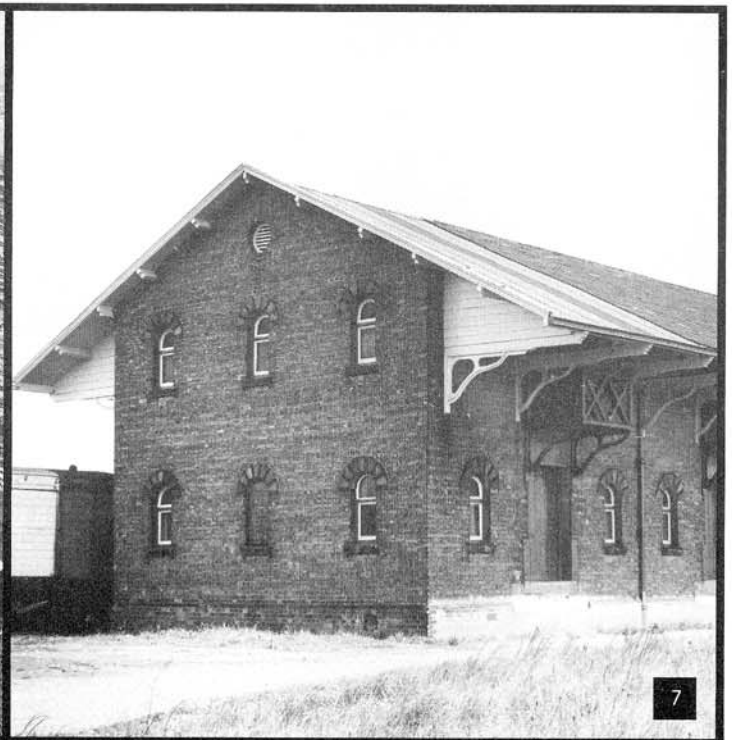
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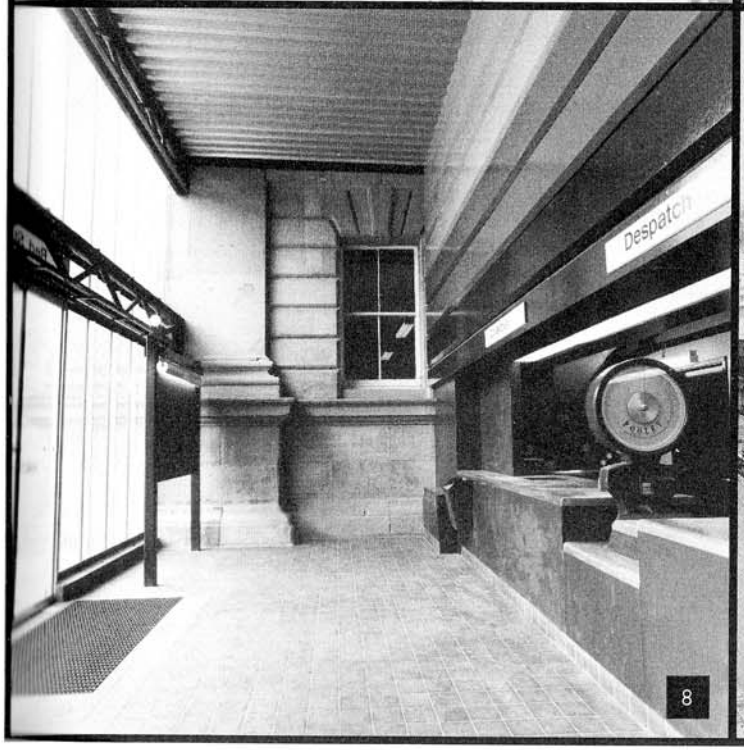
Despatch
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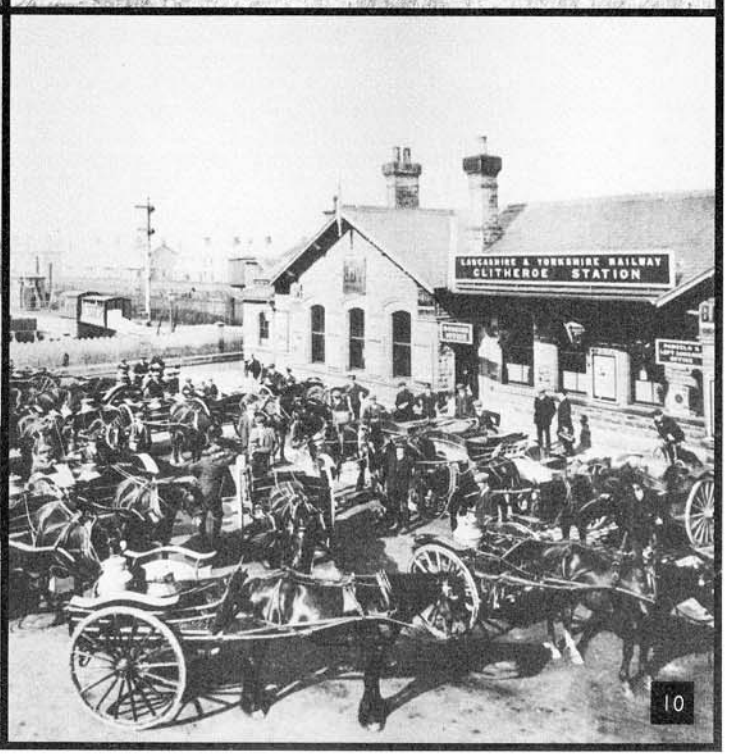

LANCASHIRE & YORKSHIRE RAILWAY
CLITHEROE STATION
10

BED AND BOARD

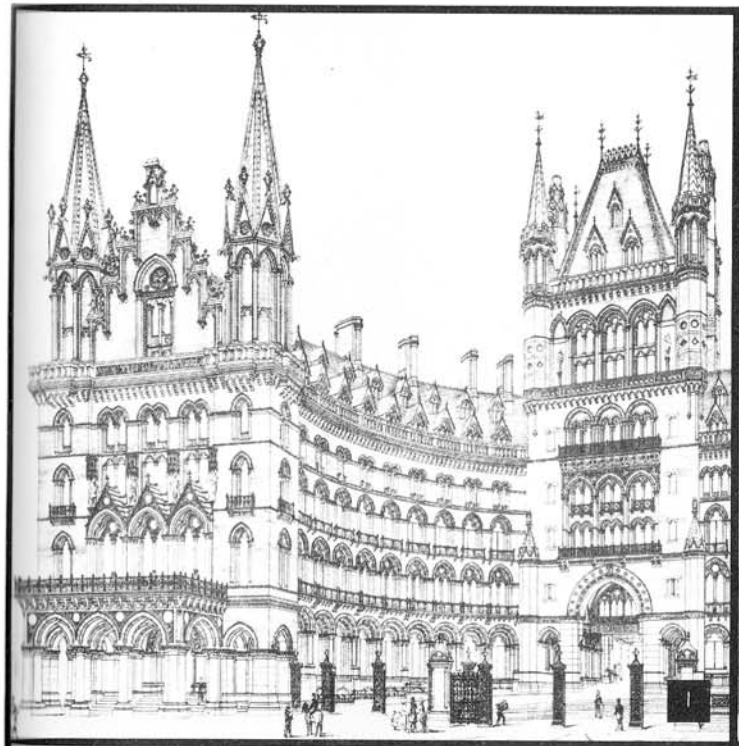
As has been shown, railway companies often provided living accommodation for station masters, so that they could be available more or less round the clock. Sometimes, as at West Croydon, the house was separate, and not an integral part of the station buildings.

The railways built tens of thousands of houses for their employees—of necessity to have them living near their places of work—not from any sense of altruism. Having said that, many companies did take trouble to see that workers were, by the standards of the time, decently housed. Whole communities of railway owned buildings were established, as at Swindon.

A reduction in the working day saw the introduction of 'lodging turns', where train crews would have to stay away overnight. Many companies built barracks or hostels like the example at Blackpool, where the thrifty Lancashire and Yorkshire Railway recouped some of the cost by leasing out shops on the ground floor.

At the other end of the social scale, railway hotels were an early development in the provision of amenities for customers. That at York, opened in 1852 and replaced in 1879, was said to be the first in the world to be actually incorporated in the structure of a railway station. Some railways built or acquired resort hotels, and by the end of the nineteenth century, all the London main line termini had hotels associated with them. As London showpieces for the railways concerned, these tended, in later years, to be built in accordance with, or perhaps sometimes even in advance of, contemporary architectural taste. Hence the remarkable Midland Grand at St. Pancras, which is said to have inspired a French visitor to paraphrase Maréchal Bosquet and exclaim: *'C'est magnifique . . . mais ce n'est pas la gare!'*

1. St Pancras *NRM*, **2.** Blackpool *NRM*, **3.** Aintree *NRM*, **4.** Canon Street *NRM*, **5.** York *NRM*, **6.** West Croydon *NRM*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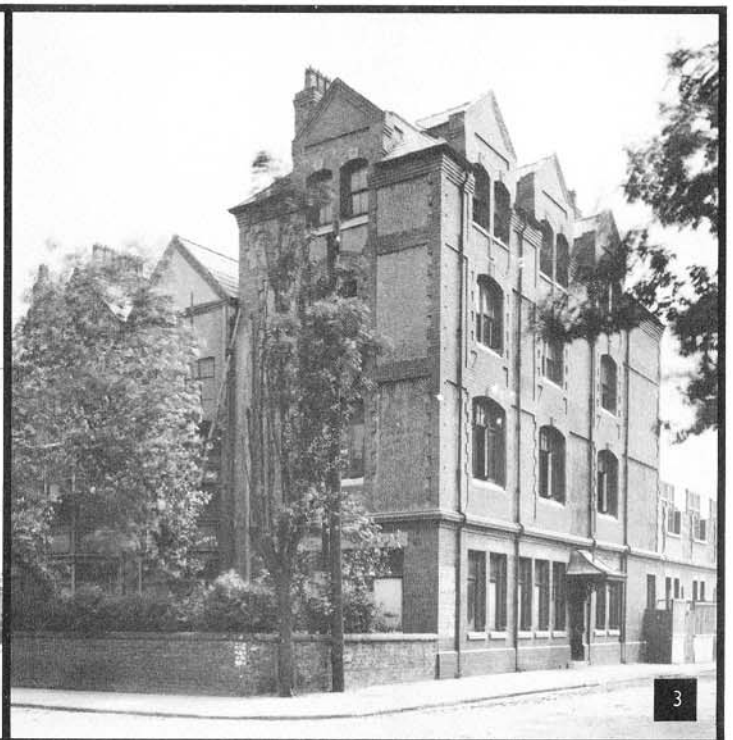
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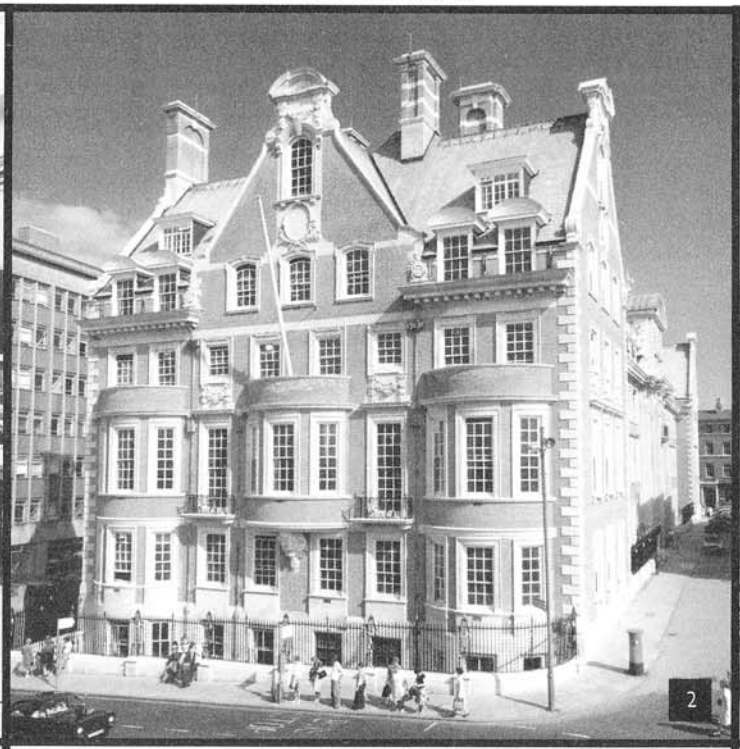
ADMINISTRATION

For much of the nineteenth, and the early part of the twentieth centuries, the larger railway companies were probably the biggest and most complex business undertakings in the country. During much of that period they were not well managed by modern standards; they did not employ sufficient staff to monitor business performance accurately, and then implement appropriate action. This began to change in the 1890s under the influence of American business methods. In fact, the pendulum probably swung too far the other way, with the eventual emergence of several tiers of officials reporting or issuing instructions to each other; barely a statistic went unchecked or a penny went missing without action being taken to prevent a recurrence. The scale of railway offices reflected these changes. The Manchester and Leeds Railway offices were adequate for scope of that company's operations, but the Lancashire & Yorkshire offices at Hunt's Bank, Manchester Victoria, had to be expanded piecemeal, always just failing to be adequate. The Great Eastern offices were integrated in the station/hotel complex at Liverpool Street, but at York, the North Eastern adopted a different policy. Land was slowly acquired adjacent to the old station, for a purpose-built head office. This was conceived on a grand scale, as a deliberate gesture of confidence at a time when trade in the North East was in recession.

Modern office blocks are more functional, providing better working conditions. They are also more flexible in that internal accommodation can be altered to suit changing needs. In the past 20 years, several re-organisations have taken place, reducing and concentrating administrative staff. At York, the completion of Hudson House was a major factor in securing economies by amalgamating the Eastern and North Eastern Regions with Headquarters in the city.

1. York Boardroom *BR*, **2.** York Headquarters *BR*, **3.** Liverpool Street *BR*, **4.** Oldham Road, York *NRM*, **5.** Hudson House, York *BR*, **6.** Manchester Victoria *NRM*

1



2

3


MANCHESTER AND LEEDS RAILWAY OFFICES

4

5


LANCASHIRE & YORKSHIRE RAILWAY
VICTORIA STATION
LANCASHIRE & YORKSHIRE RAILW

6

UNCONSIDERED TRIFLES

In the days when small country stations might have half a dozen staff living locally, there was plenty of time between trains, or in off-duty hours for the creation and care of elaborate station gardens. Pride in their stations engendered many examples of local enterprise by station masters and their staff; a national celebration, like the Coronation of 1937, would see stations suitably decorated with home-made flags and bunting as in this splendid picture of Tavistock, with the porter responsible.

Jubilees and royal weddings would also usually involve the railways. There has long been a strong connection between railways and royalty; some stations like Windsor (L.S.W.) had Royal Waiting Rooms, with private entrances.

Even main-line stations, like Marylebone could manage some kind of floral display during spring and summer. But what a pity that the proliferation of posters, signs and enamel adverts had already made the station look messy, although it had only just opened. By comparison, Worthing looks tidier; the Electric and Gas Exhibition at the Crystal Palace sounds a bit of a bore, but how about the firework display, or the evening concert for a shilling?

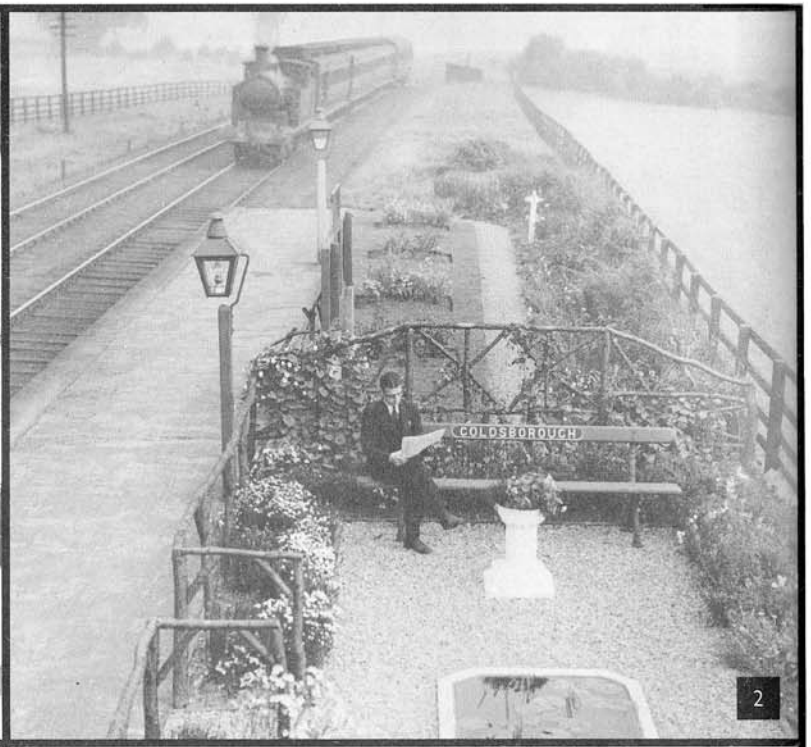
Good signs and notices, combined with careful use of advertising, enhance any public building. Unfortunately, most railway companies tended to run amok, plastering every piece of blank wall, until it was virtually impossible to see what building material had been used. The preserved and restored L. & Y. signs at Hebden Bridge show just how good railway signing could be, when see in isolation.

Opposite: Tavistock *NRM*

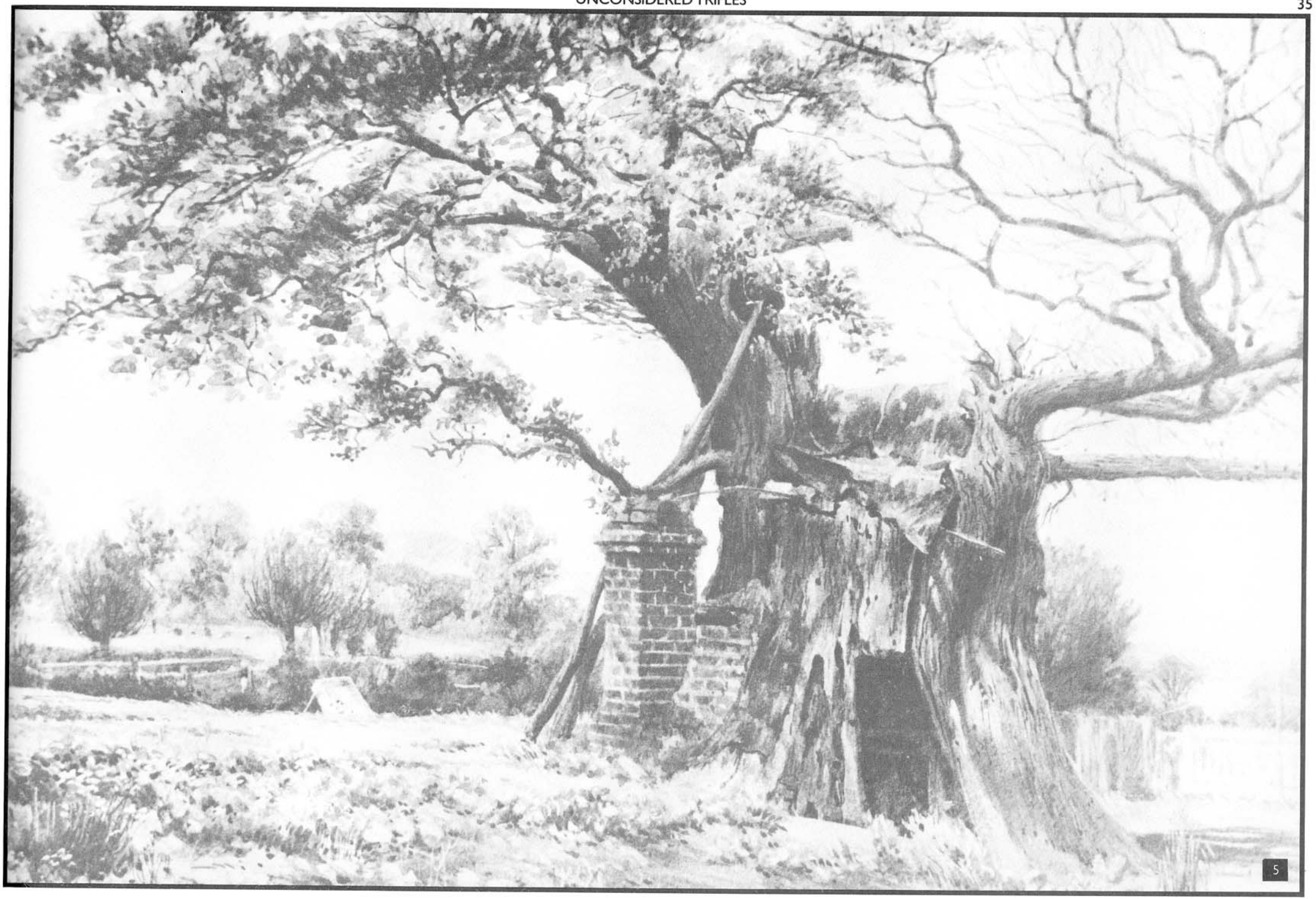

TOYS
GAMES
OUTHERN
TAKE YOUR DOG
WITH YOU BY RAIL
NESTLE'S
CHOCOLATE
ALL
SEASON
TICKETS
TO BE
SHEWN
TAVISTOCK
Stephens'
Stephens'
TRAIN SE
E

Much use has been made in these comments of the two world wars as punctuating points for changes in railway architecture. After the First World War virtually everything changed, but after the Second World War, hardly anything did. Indeed, from the railway architecture point of view things almost seem to stand still, or even regress for a while. Potters Bar dates from the 1950s, yet apart from a few 'Festival of Britain'-inspired details, the waiting room and booking office interiors could easily have been built 20 years earlier. The post-war shortages of materials, arrears of maintenance and repair of bomb damage, were still affecting what could be done.

And what about the tree which the impecunious Shrewsbury & Hereford Railway was forced to use as a station at Moreton? Hardly architecture, perhaps; certain an awful warning of what happens when resources fail to match aspirations . . . but what could be more appropriate—for a branch line station?



1. Marylebone *NRM*, **2.** Goldsborough *BR*, **3.** Potters Bar *Architects Journal*, **4.** Worthing *NRM*, **5.** Shrewsbury and Hereford Railway *NRM*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RAILWAY ARCHITECTS

The early railways generally commissioned architectural work for individual contracts; some of the more impoverished ones actually left detail design to contractors or sub-contractors, who worked to a specification and to a price, often with unhappy results.

Some architectural practices, like those of G.T. Andrews and Sir William Tite, became closely associated with particular companies.

On many lines, the engineer was responsible for building design, the classic example being Isambard Kingdom Brunel. He was typical of the early Victorian engineer-architect, at a time when there was often little distinction between the two disciplines.

On the next two pages are some notable examples of work by four men, two hardly known and two prominent in their profession.

In the latter part of the nineteenth century most of the larger railways had architectural departments; the first to establish one was the North Eastern in 1857. Gradually company architects were appointed and by 1899, at least four major railways had senior officials discharging these duties. This policy was developed after the 1923 grouping by 'The Big Four', London Transport and later by British Railways.

In-house architects had the advantage of being able to build up expertise on requirements peculiar to railways. The Architects' Department of the Southern Railway and London Transport achieved notable success in adapting contemporary styles to railway use between the wars. Railway architects have always been to the fore in trying out new systems and materials. The L.M.S. Architects' Office developed an early unit station building, utilising a steel frame with vitreous enamel infill panels. British Rail's Southern Region pioneered the adaptation of the CLASP system for railway use, and Eastern Region Architects conducted early experiments with glass reinforced plastic relay rooms. Examples of some of these, and of more recent work will be found on pages 46–49.

LIVOCK

John William Livock
Designed fine Tudor-Jacobean stations on London and Birmingham Railway's Blisworth-Peterborough line (1845), Trent Valley Railway (Rugby-Stafford), 1847, and also responsible for stations on L.N.W.R. Bletchley-Oxford-Banbury lines (1850) and the frontage and hotel block at Birmingham New Street (1863).

1. Tamworth *G Biddle*, 2. Clayton *G Biddle*

TITE

Sir William Tite, C.B., F.S.A., F.R.S., F.R.I.B.A.
Well-known prolific Victorian architect, RIBA Gold Medallist 1856, company director, M.P. and man of affairs. Work included Royal Exchange, London (1844). Designed stations for London and Southampton, Lancaster and Carlisle, Caledonian and (with E.N. Clifton) London and South Western Railways. Notable stations: Nine Elms (1839–40), Southampton Terminus (1839–40), Gosport (1841), Windsor and Eton Riverside (1851), Carlisle (1847) and Perth (1847).

3. Southampton *G Biddle*, 4. Carlisle *G Biddle*


1


2

3


4

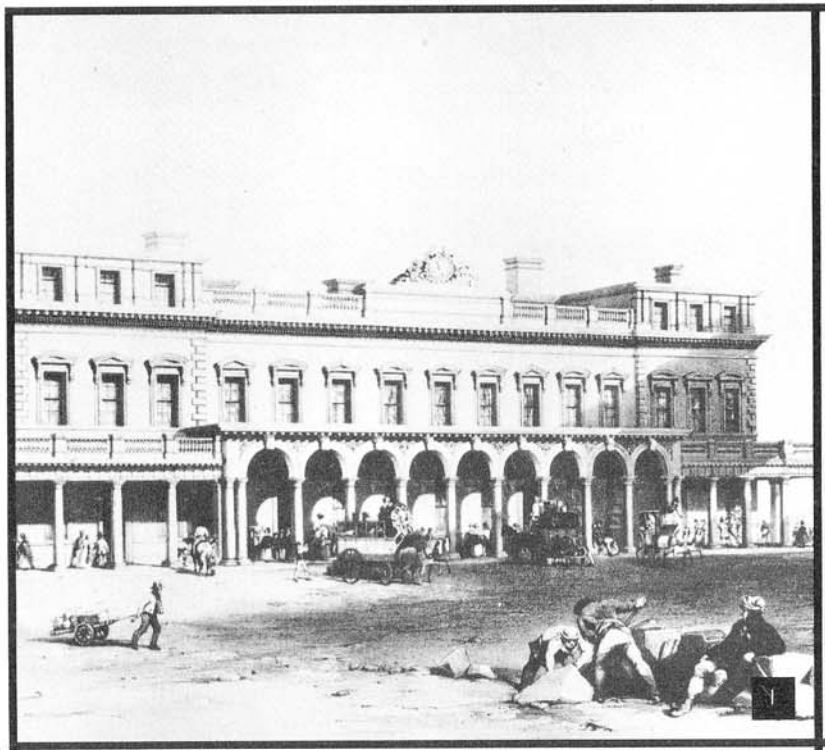
MOCATTA

David Mocatta F.S.A., F.R.I.B.A.
Pupil of Sir John Soane, and a vice-president of RIBA. Architect to London and Brighton Railway and responsible for Brighton terminus (1841) and a series of pioneer unit stations based on a standard plan but with different external styling; also detailing on Ouse Valley viaduct.

1. Brighton *NRM*, **2.** Wayside *NRM*

THOMPSON

Francis Thompson
Born 1808, son of George Thompson, architect and surveyor of Woodbridge, Suffolk, who worked under C.R. Cockerell, R.A., who in turn may have influenced Francis. Designed notable stations for North Midland, Chester and Holyhead, Eastern Counties and probably other railways. Major works Derby and Leeds (1841), Chester (1848) and Cambridge (1845). Also prepared an unexecuted design for Birmingham New Street.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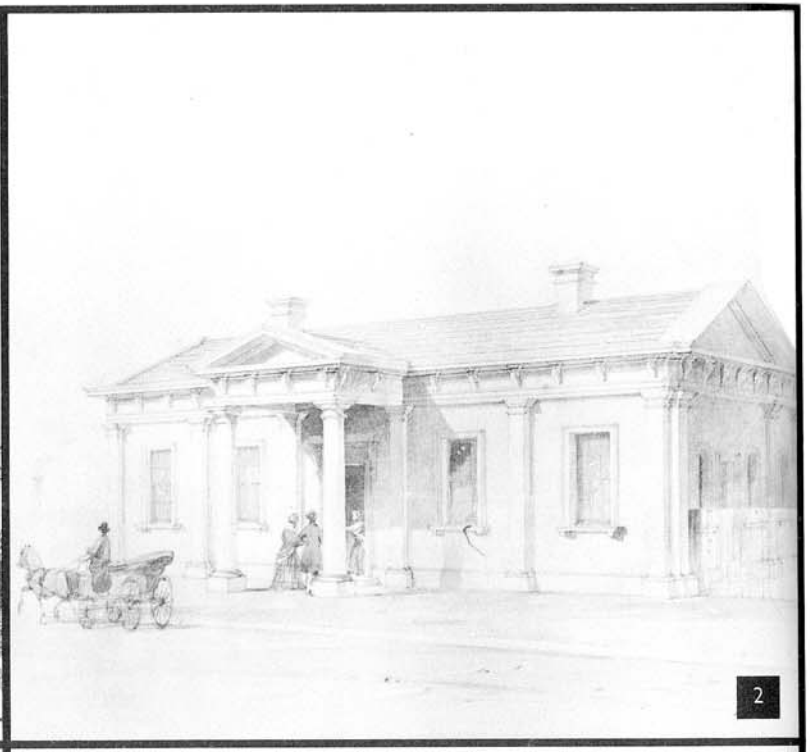
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3. Great Chesterford *G. Biddle*, **4.** Chester *G Biddle*

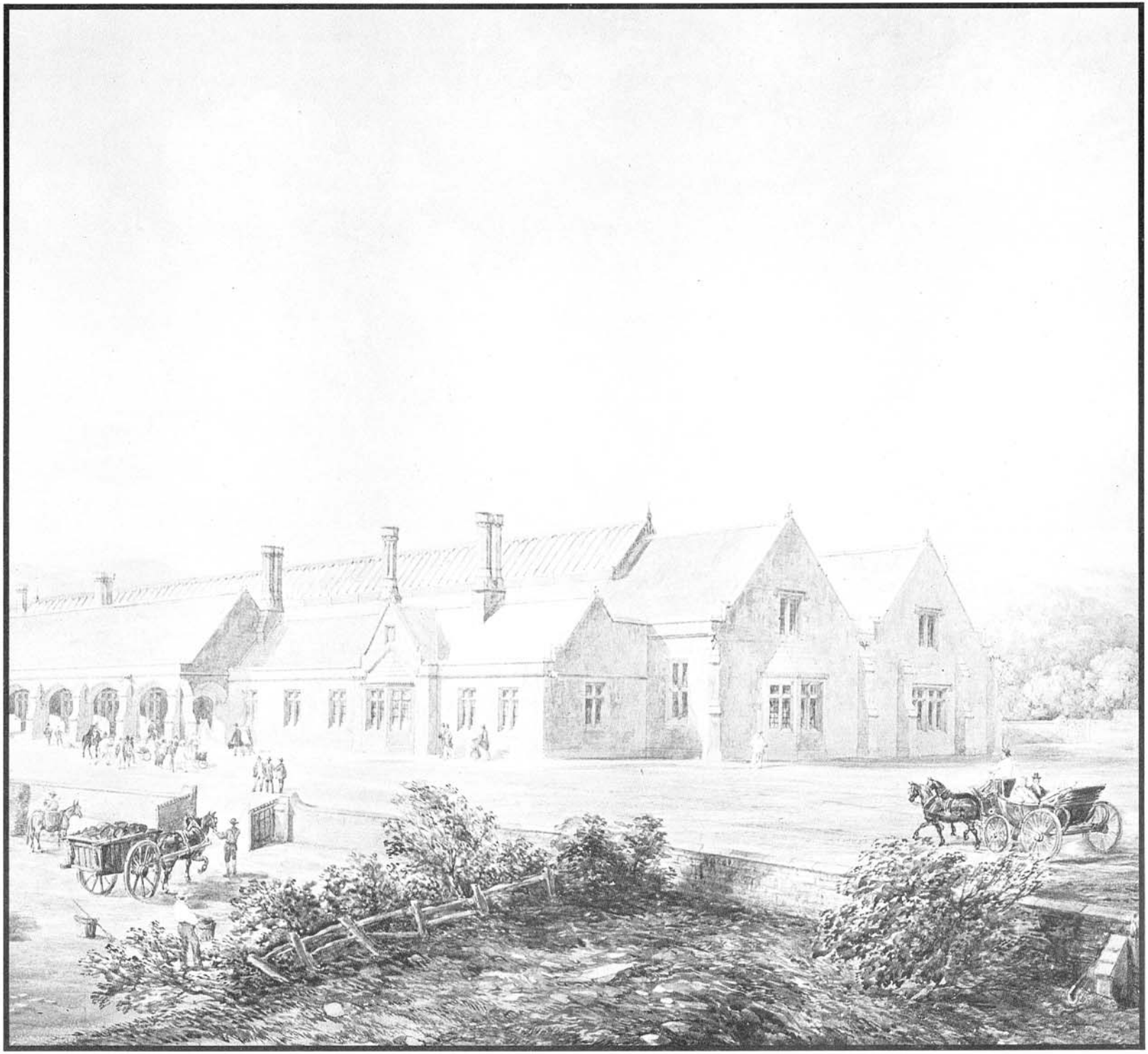
ANDREWS

George Townsend Andrews

George Townsend Andrews was a York architect who designed a number of distinguished public buildings in and around the city, but is best known as a prolific and consistently good designer of early railway buildings. A friend of George Hudson, the 'Railway King', he designed (from 1839 onwards) all the buildings for Hudson's railways in Yorkshire and Durham. This prodigious output ranged from humble coalyards, to the picturesque gothic terminus at Richmond, depicted in his office watercolour as a bustling centre of local life.

The 'Railway Mania' of the 1840s brought Andrews much work; he rapidly evolved mature designs to meet the new, special needs of railways. With the disclosure late in the decade, that Hudson had been thoroughly unscrupulous in conjuring fat dividends from his companies, Andrews fell into disfavour. He even lost his job as architect for the new town being built on Whitby's West Cliff. Andrews' finances failed, but he continued to produce some interesting designs, until he died in 1855 'broken-hearted', according to the nephew of a friend.

Andrews' first major station was at York—a remarkably consistent work, despite a lapse of twelve years between the original design, shown in the office sketch, and completion of the hotel, built across the end in 1852. The train shed was roofed with light, spidery wrought-iron trusses of the type pioneered at Euston. Andrews at York, however, integrated the train shed design with that of the station offices. This harmonisation was only fully mastered in his later work such as Richmond and Ilkley. Of his contemporaries, only Brunel and Dobson displayed comparable skill in blending 'engineering' and 'architecture'.



This page: Richmond *NRM*

ANDREWS

The intrinsic quality of the design of York still impresses today, despite the addition of an extra storey, and the filling in of the colonades over a century ago. Andrews' very first railway commission –the sweeping Tudor arch to admit the railway through the city walls–can be seen in the background.

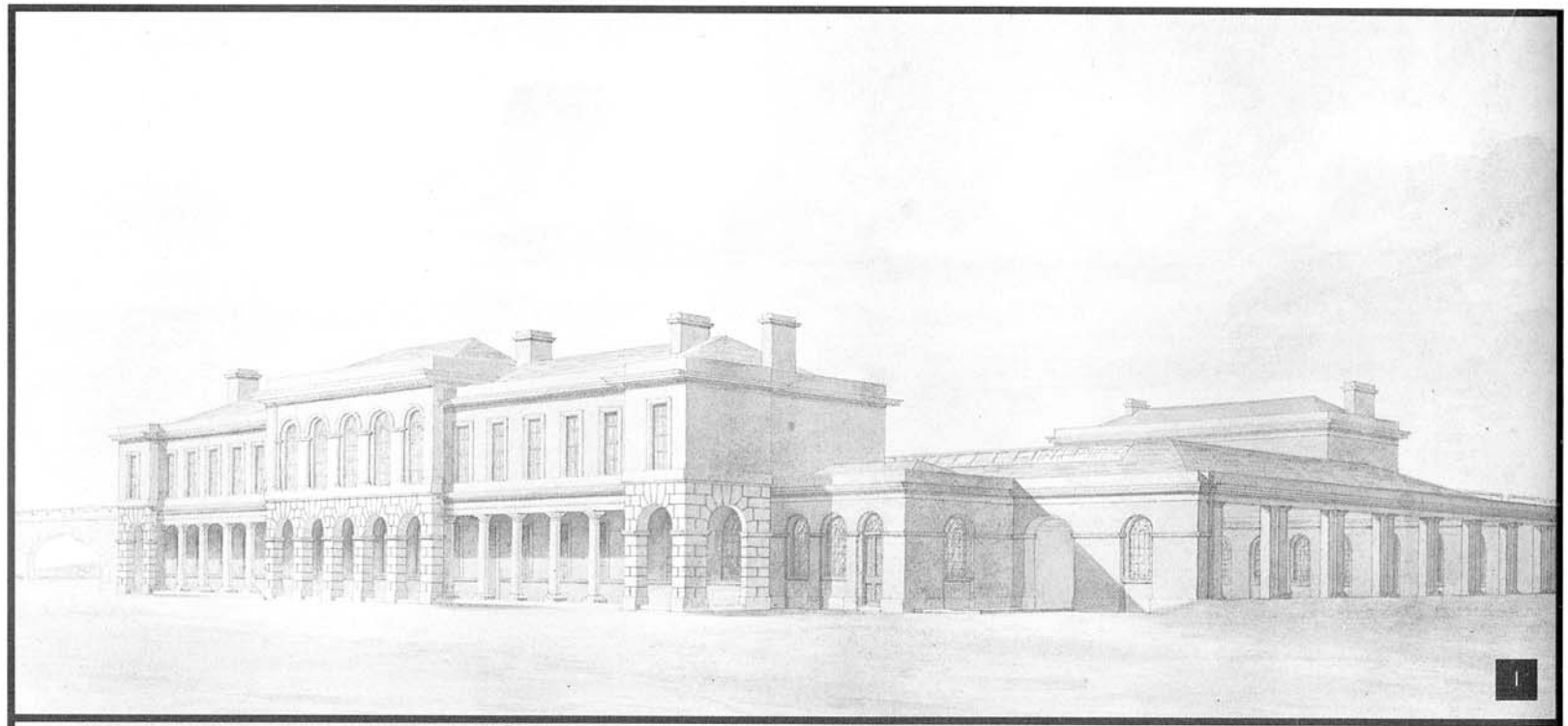
At Normanton, Andrews' junction station was another pioneering design, with island platforms linked by an overhead booking hall.

His exuberant Italianate Palazzo at Hull still dominates the station frontage, though later buildings crowd in the original office façade. This was boldly articulated into three pavillions with a central porte-cochére, now blocked. The Palazzo style was used on a small scale at Beverley, but Pocklington was a more typical country-town station, with its arched entrance, and sparing use of ornament. Wayside stations were carefully detailed houses, with deep-eaved, low-pitched roofs, and occasionally a small portico as at Nafferton. Exceptionally, Andrews adopted an elaborate Italianate style for one small station, that serving the great mansion of Castle Howard.

Picturesque areas, like the Esk Valley evoked, an appropriate response in the form of ingeniously varied gothic designs. Ruswarp is typical, but no two of these stations were exactly alike.

Andrews provided his patrons with a recognisable house style, which included touches like the use of alternating plain and lilac-coloured cylinder glass in his trainshed roofs, producing a visually cool effect on bright sunny days.

His goods sheds, with handsome lunette windows and hipped roofs, echoing those of his passenger train sheds are distinctive. So are the many former crossing keepers cottages, whose arched chimneys conspicuously mark the routes of vanished branch lines across the fields of East Yorkshire....



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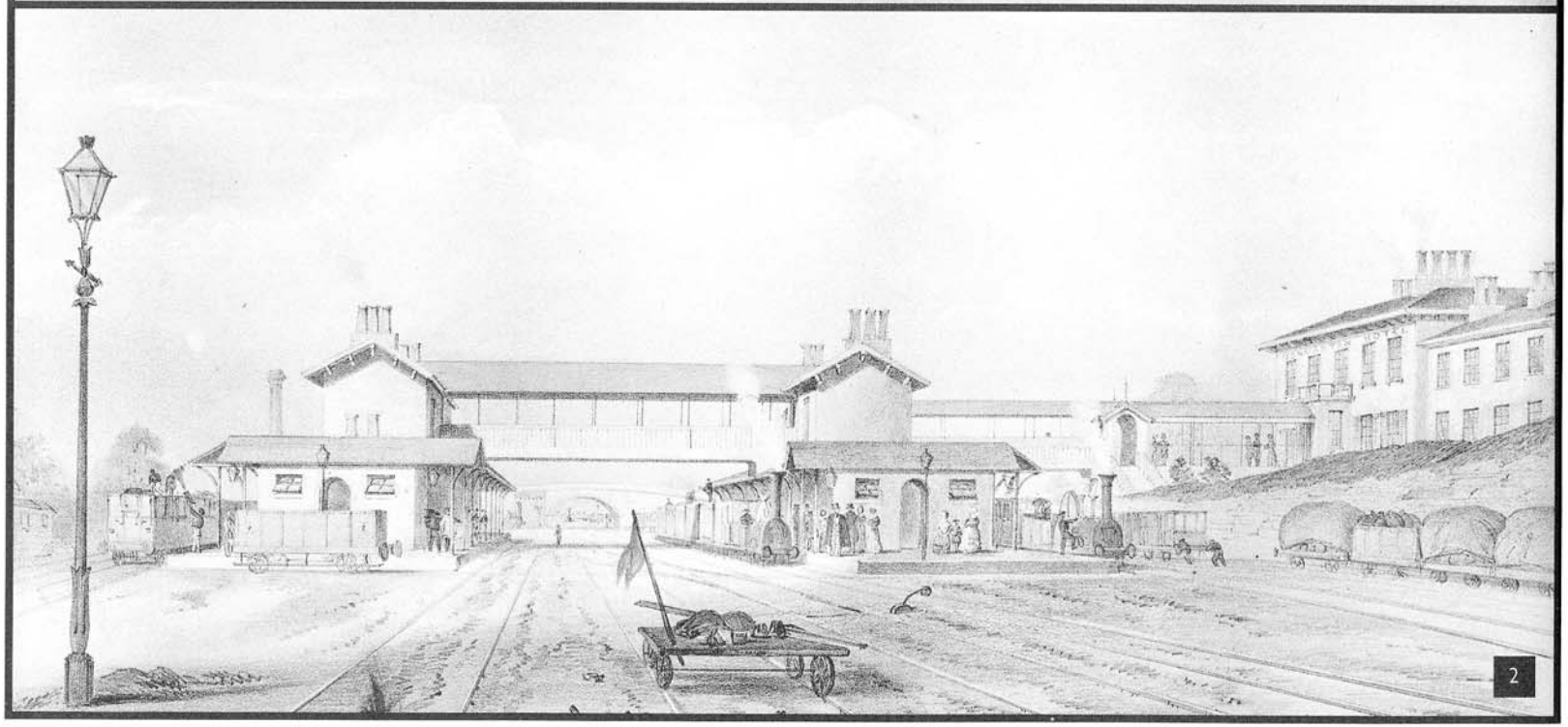

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1. York *NRM*, **2.** Normanton *NRM*, **3.** Pocklington *G Biddle*, **4.** Nafferton House *Dr W Fawcett*, **5.** Castle Howard *Dr W Fawcett*, **6.** Hull *G. Biddle*, **7.** Belmont *Dr W Fawcett*, **8.** Ruswarp *Dr W Fawcett*


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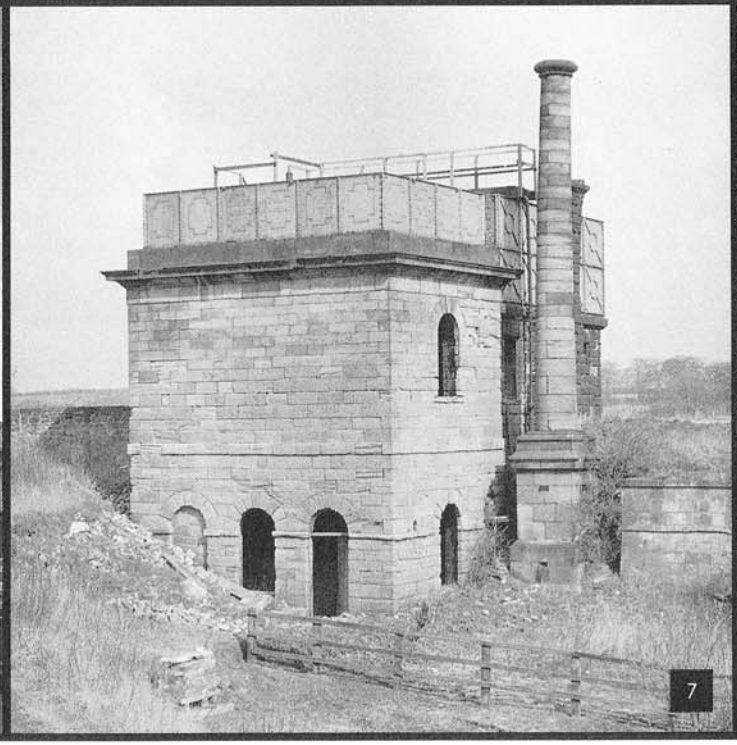
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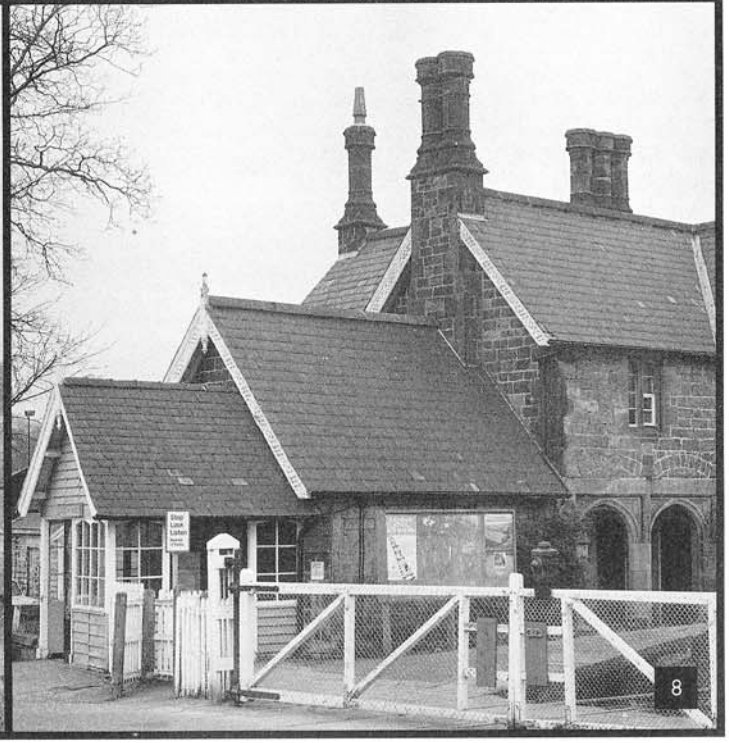
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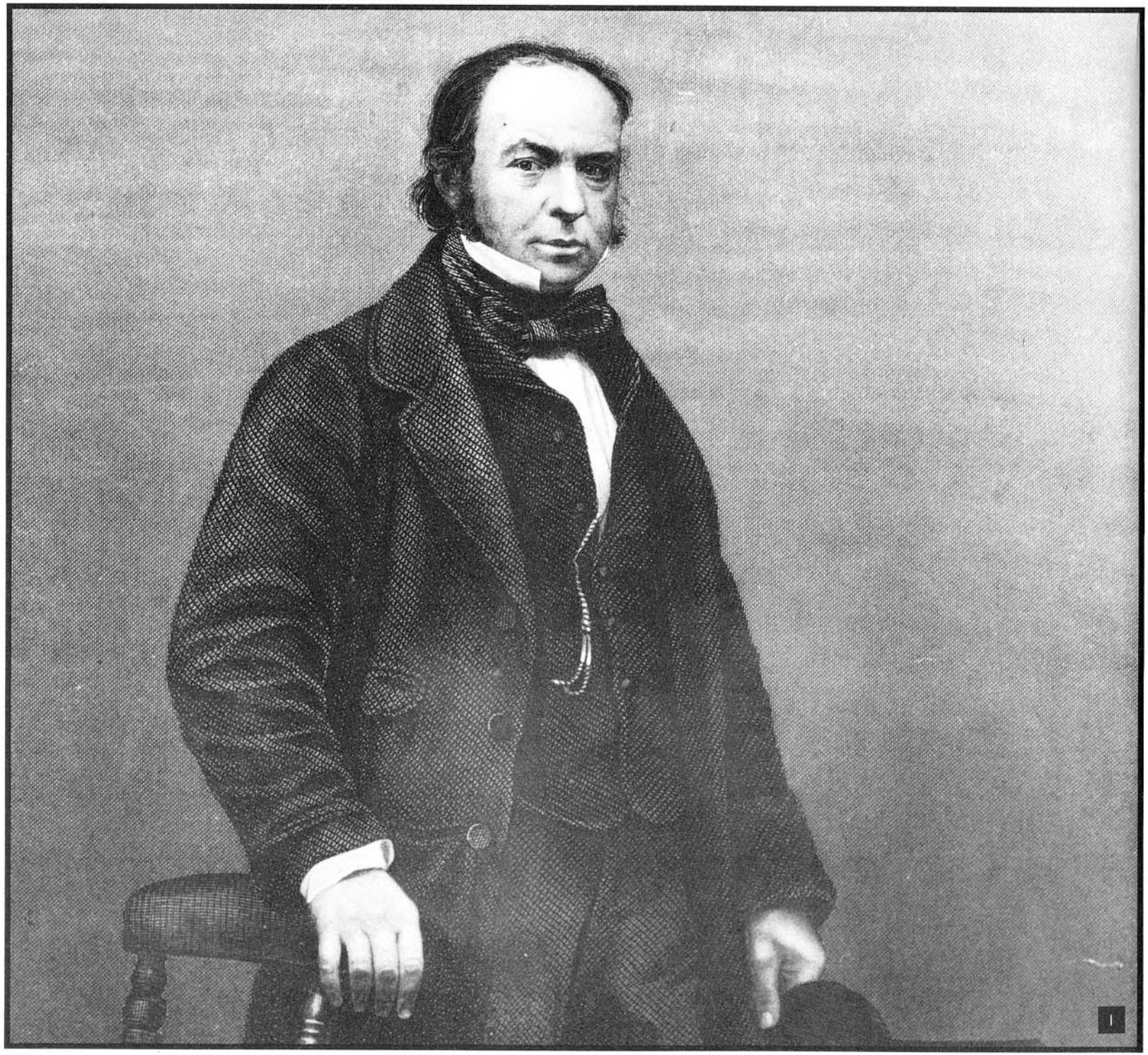
BRUNEL

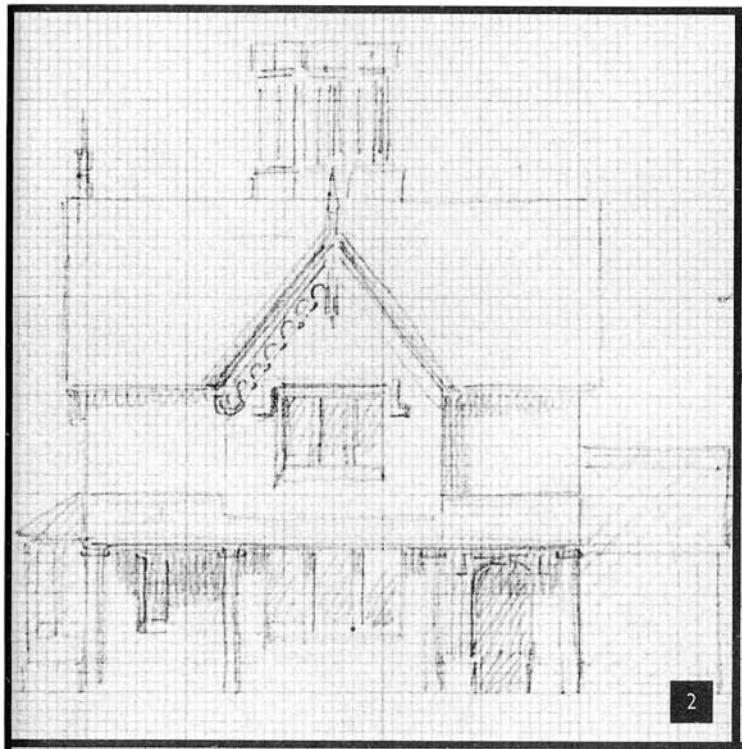
Isambard Kingdom Brunel is an immensely popular nineteenth century figure; as typifying the era his memory is perhaps only eclipsed by that of Victoria and Albert. A genius and wit, who, according to his contemporaries, was also insomniac, depressive, over-ambitious, demanding and determined, Brunel completed an incredible number of projects in a comparatively short life. When engineering the Great Western Railway from London to Bristol, he found extra energy to design the humblest station master's cottage, even detailing staircases, gas light fittings and plaster-work. This, at a time when his diary and sketch-books reflect preoccupations with designing a screw-propeller for the s.s. *Great Britain*, and fixing-pin specifications for the Clifton Suspension Bridge chains.

An engineer first and foremost, Brunel's architectural abilities are amply demonstrated in many surviving buildings, ranging from major stations, to worker's terraced houses. He was certain a copyist, changing, even mixing, style and motif when it suited him, often to great effect. His best work rivalled that by famous contemporary architects, and Brunel can be regarded as a pioneer in the use of architectural style as a means of creating an individual identity for a great railway company.

The mid-1830s saw a reaction against the classical and Palladian styles, with a 'Merrie England' revival. Brunel consequently chose an English look for his G.W.R. stations—an eclectic mix of Gothic, Tudor, Elizabethan and Jacobean. His extraordinary capacity for hard work, and passion for perfection, are reflected in the hundreds of sketches he made.



1. Isambard Kingdom Brunel *CB*, **2.** Superintendent's Cottage *UB*, **3.** South Devon Pumping Station *UB*, **4.** Station Master's House *UB*, **5.** Bath Station *UB*, **6.** Paddington Roof *UB*, **7.** Lamp Posts *UB*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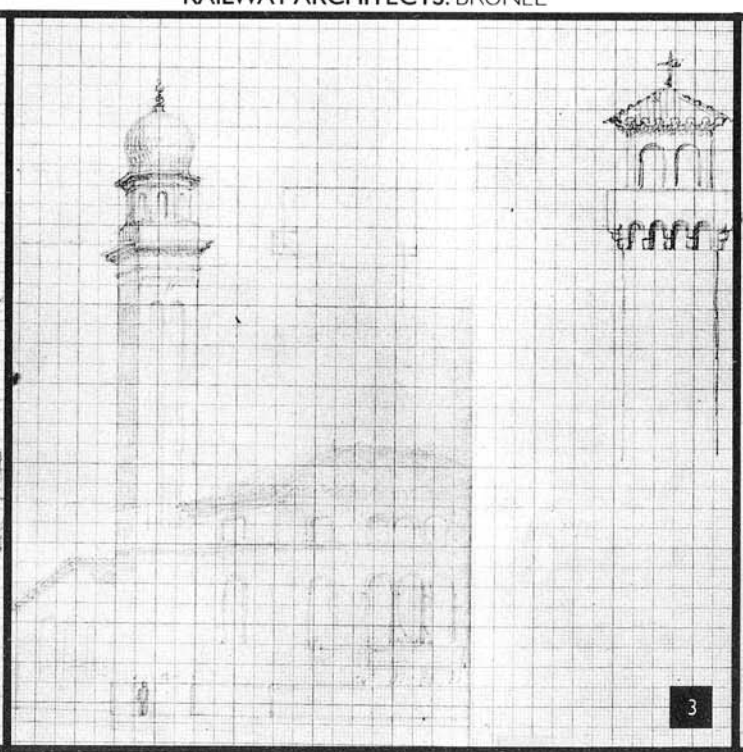
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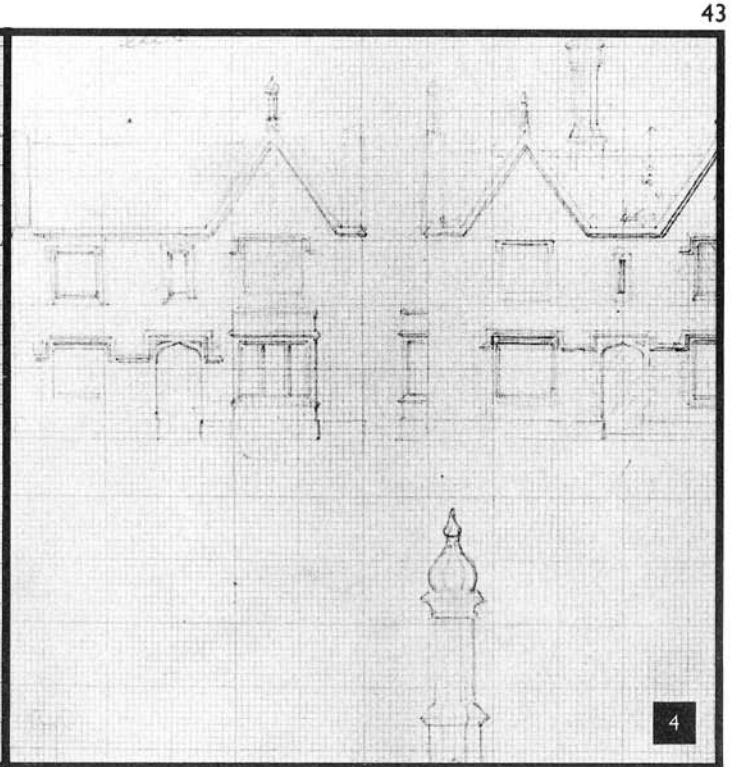
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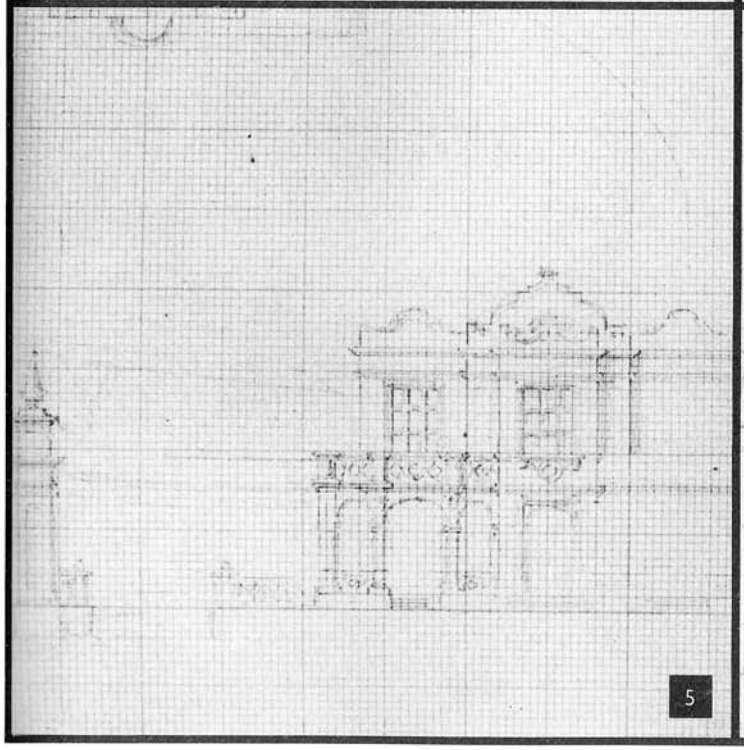
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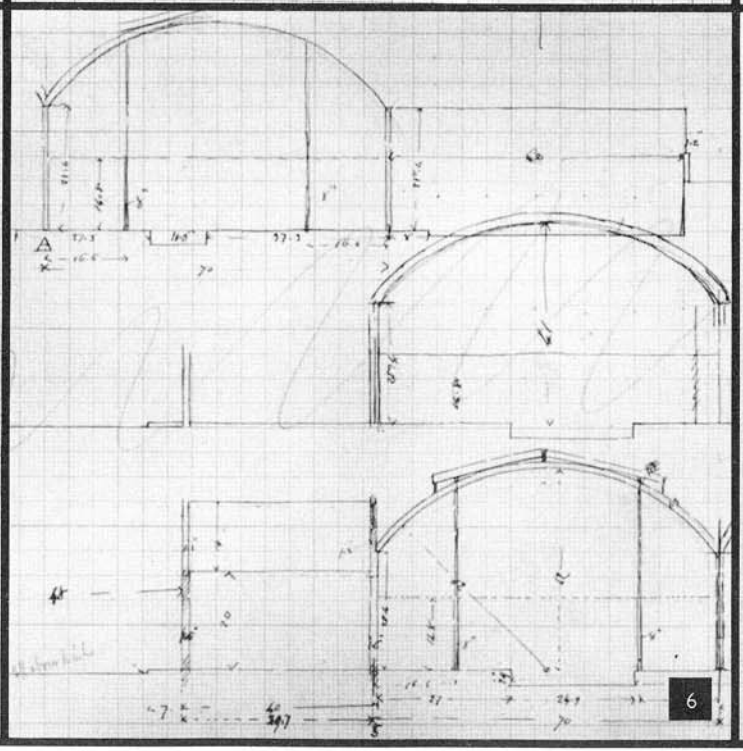
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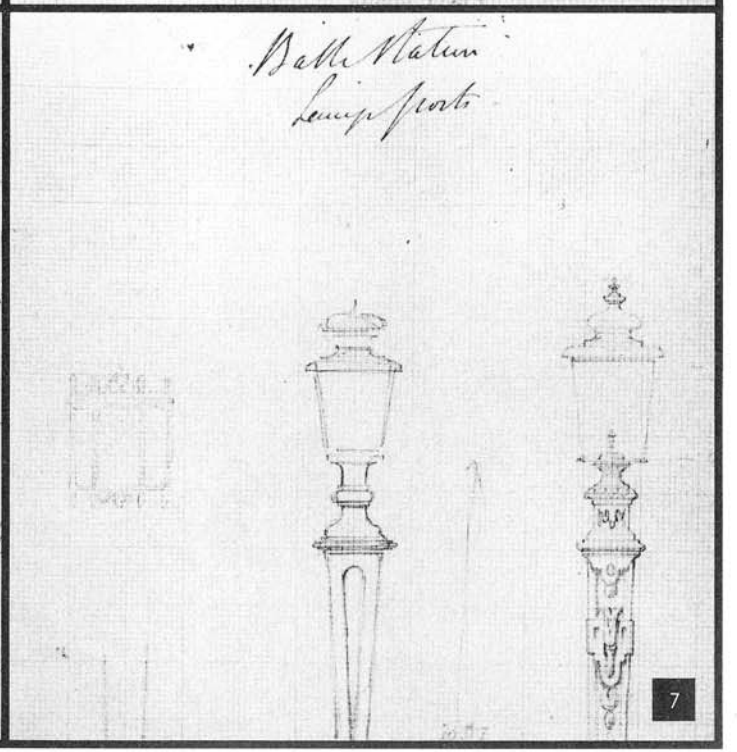

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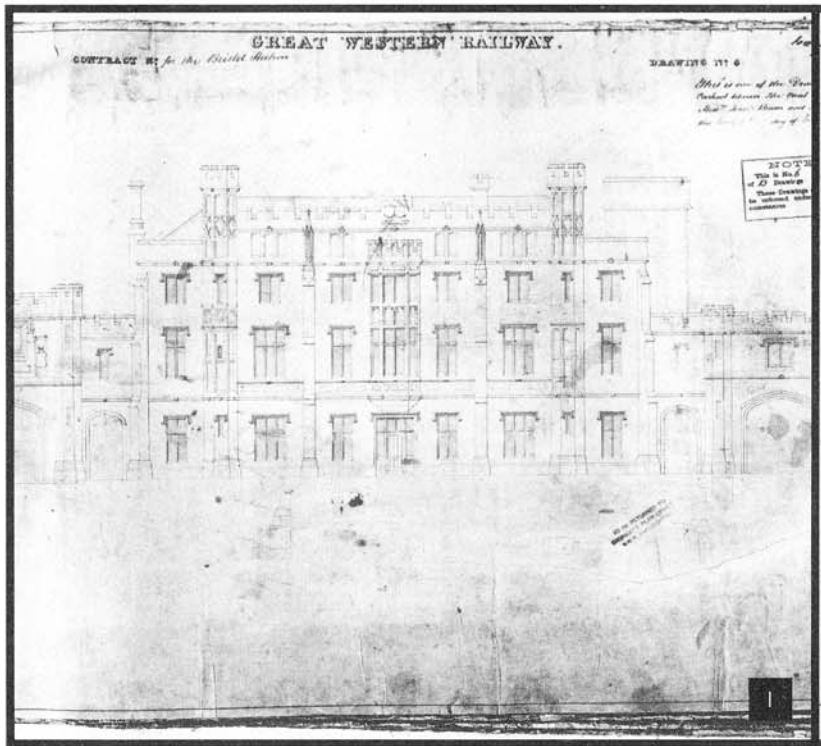
BRUNEL

No architectural feature was too small for Brunel's personal consideration, and when supervising construction of the railway, he would work far into the night producing sketches and notes. These were sent back to assistants in London for them to work up into finished drawings.

Brunel was never dogmatic about his choice of architectural style—always selecting something appropriate to the setting. For the 'Cornish Rivera', with its dramatic rock landscapes and steep valleys he chose a Mediterranean look. As the Italianate pumping houses of the South Devon Railway showed, this was eminently suitable.

The quadrupling of the original G.W.R. route, and more recently, the withdrawal of stopping trains, has led to the loss of most of Brunel's minor stations on the main line, like Pangbourne. Fortunately, examples of the typical Brunel style survive at Culham on the Oxford-Didcot line and at Mortimer between Basingstoke and Reading. The cantilevered awnings on four sides are characteristic, as is the choice of vernacular materials. Proceeding westwards, the flint and brick of Berkshire give way to stone in Wiltshire. No doubt economics played a part in the use of whatever materials were available locally, but the resulting buildings still refect a sensitivity to the landscape in which they stand, and to other neighbouring buildings.

Even the most utilitarian structures, not intended for the public eye, like the engine house at Swindon and the goods depot at Bristol, were handsome and sturdy. When creating a good public impression really mattered, Brunel was capable of pulling out all the stops. Is it only coincidence that the extravagantly ornate Royal Hotel at Slough is in the Florentine style, which just happened to be Prince Albert's favourite?



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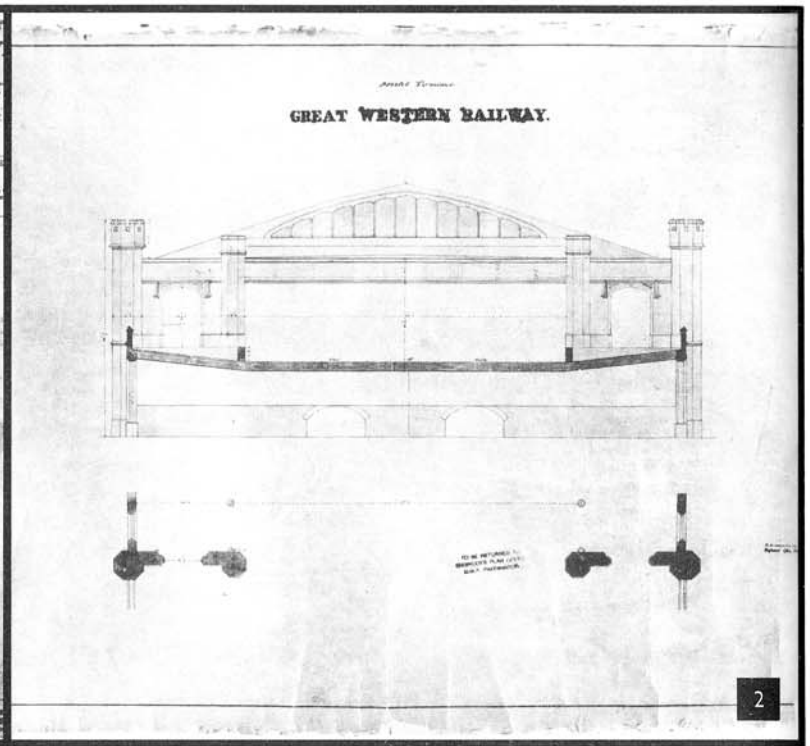

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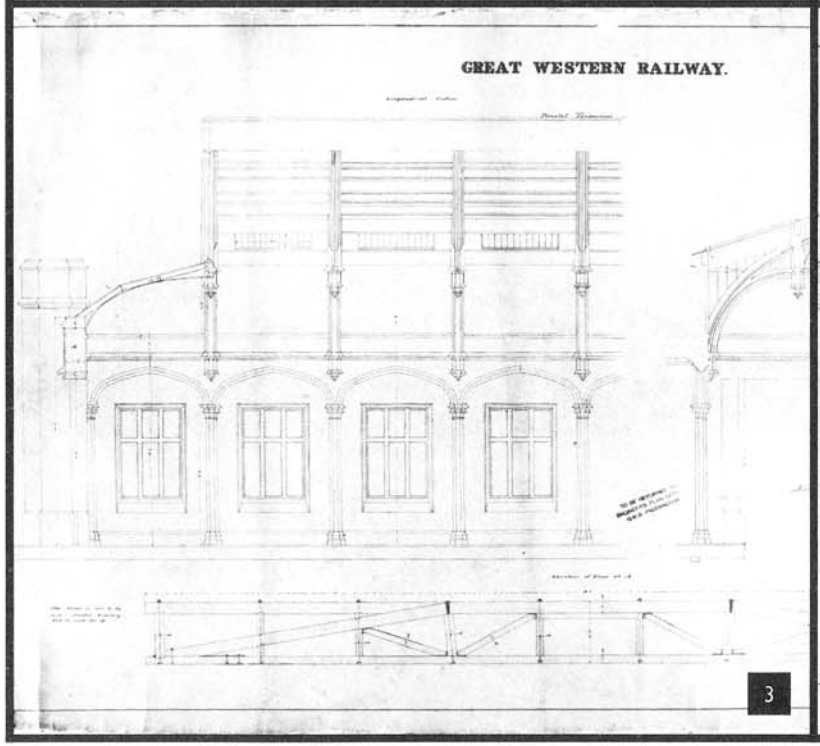

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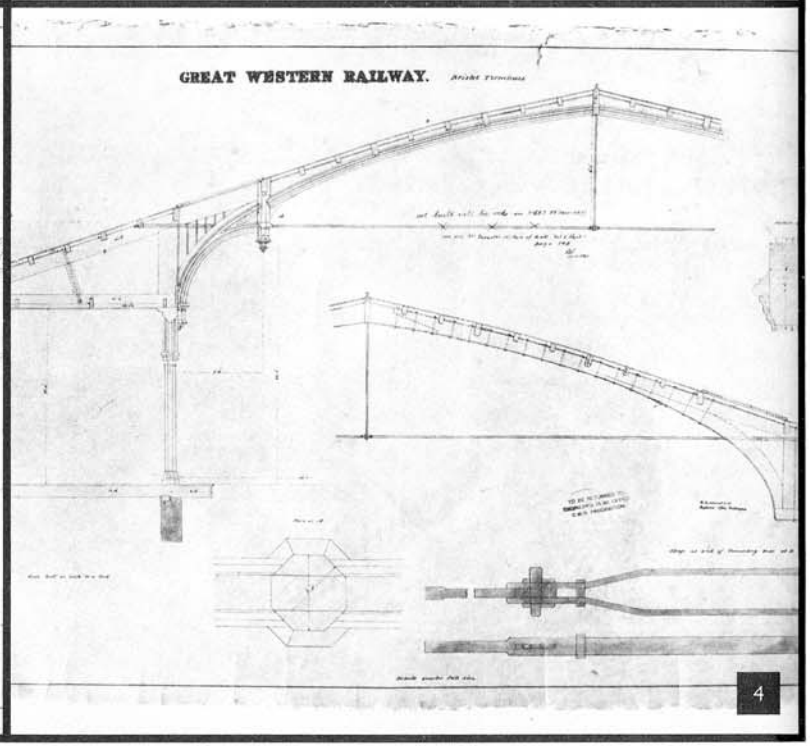

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1. Bristol Station: Street Front *BR*, **2.** Bristol Station: Rail Approach *BR*, **3.** Bristol Station: Platform Arcading *BR*, **4.** Bristol Station: Roof Structure *BR*, **5.** Culham *P Simons*, **6.** Steventon *P Simons*, **7.** Steventon *P Simons*, **8.** Wallingford Road *P Simons*, **9.** Swindon Engine House *CB*, **10.** Royal Hotel Slough *CB*


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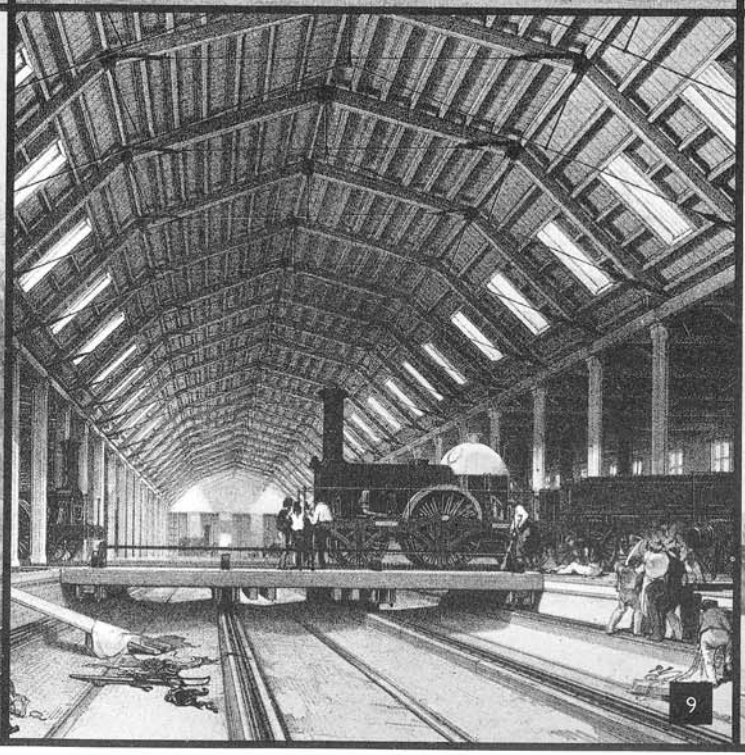
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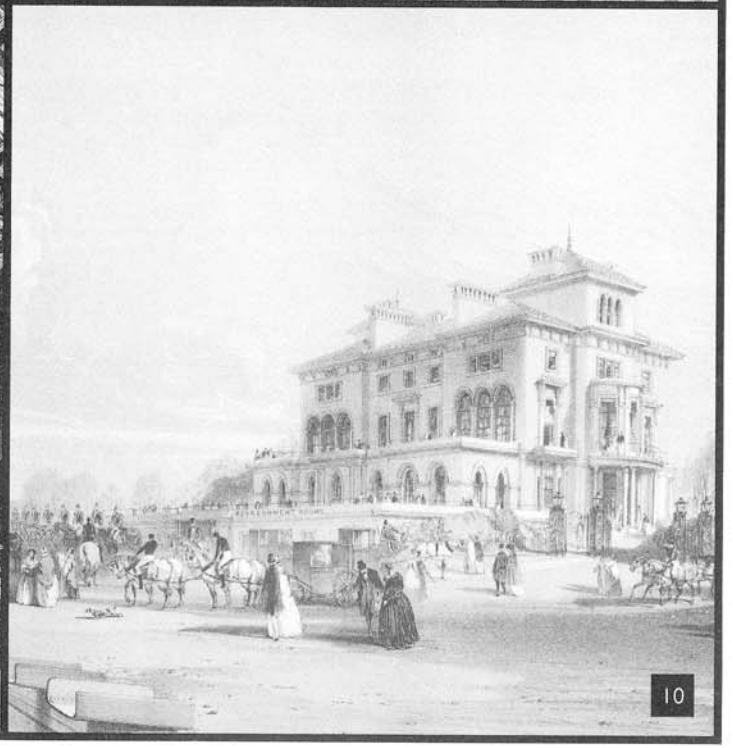
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RECENT WORK

The present Chief Architect's Department covers the whole of Great Britain from offices located at Glasgow, York, Croydon, Euston, Paddington and Marylebone. The Department is responsible for all types of new building, conservation and restoration work on behalf of British Rail, its subsidiaries, including Travellers Fare, and until recently both Seaspeed and Sealink. Work is also executed abroad, where British Rail has offices, as in Brussels.

In recent years, much attention has been paid to the working environment of staff, with an encouraging revival in the attitude that because something is out of the public eye, it need not be ugly, shoddy and cheap, in the worst sense of that word.

The seventh-floor reception area of Rail House, Euston, is of course seen by V.I.P. visitors, but the loading bay and electronics shop at the Signal and Telecommunications Service Centre at York are a purely working location seen almost entirely by railway staff. The same applies to the workshops at Bedford, and to the B.T. Police Training Centre at Tadworth.

It has recently been said that conservation represents a failure of nerve on the part of the architect. However, there are often excellent reasons for conserving railway buildings, rather than opting for demolition and replacement. The buildings themselves may be 'listed' (British Rail has charge of over 600 such structures) or repair, and adaptation may result in a building suited to modern needs, at less cost than a fresh start. Here there is scope for local government and outside bodies, like civic trusts and English Heritage to give financial help.

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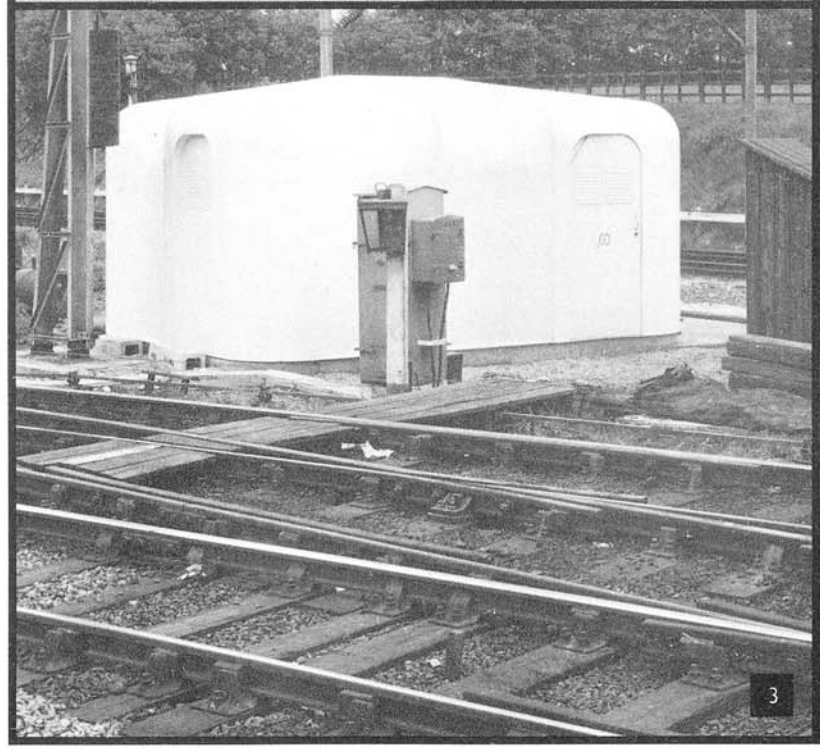

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1. West Hampstead *BR*, **2.** Nottingham *L. Gibbins*, **3.** Stanford-le-Hope *BR*, **4.** Berrylands *BR*, **5.** Birmingham International *Architects Journal*, **6.** Brussels *BR*, **7.** Rail House Euston *L Gibbins*, **8.** York, S and T *BR*, **9.** Bedford *BR*, **10.** Tadworth *L Gibbins*

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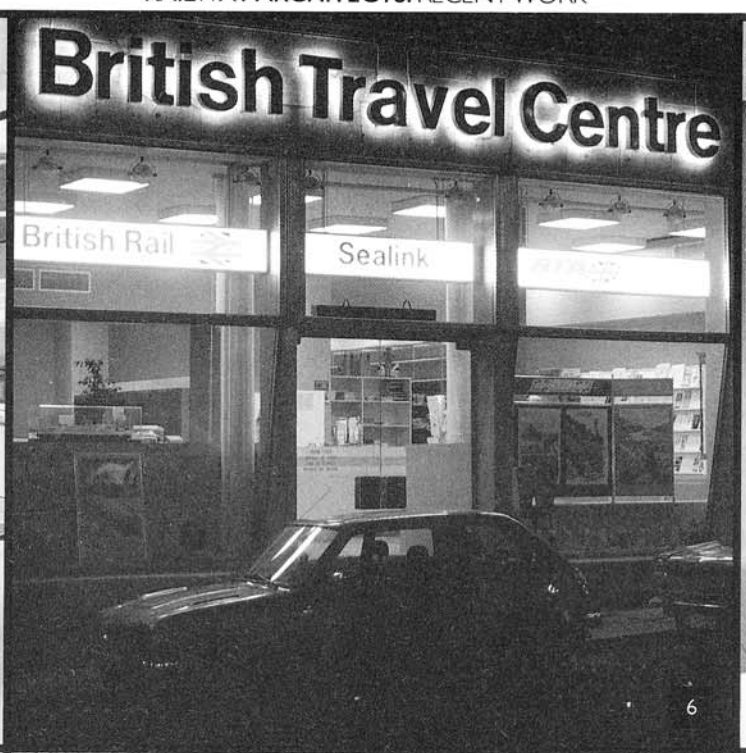

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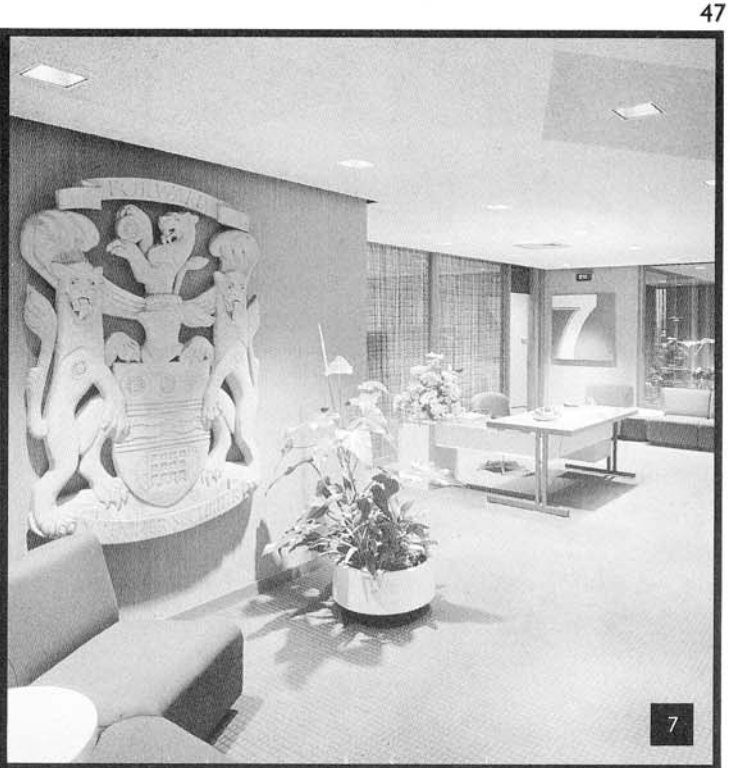

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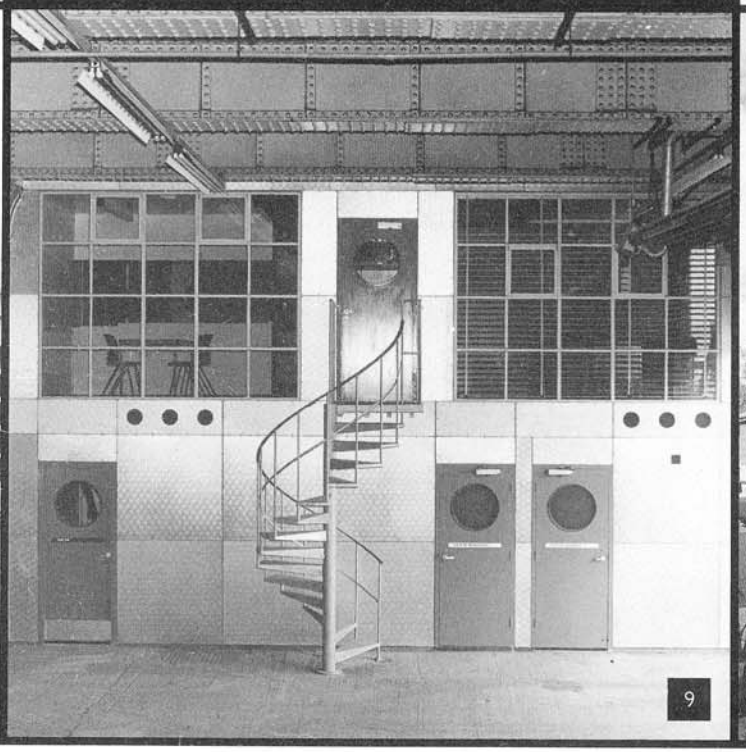

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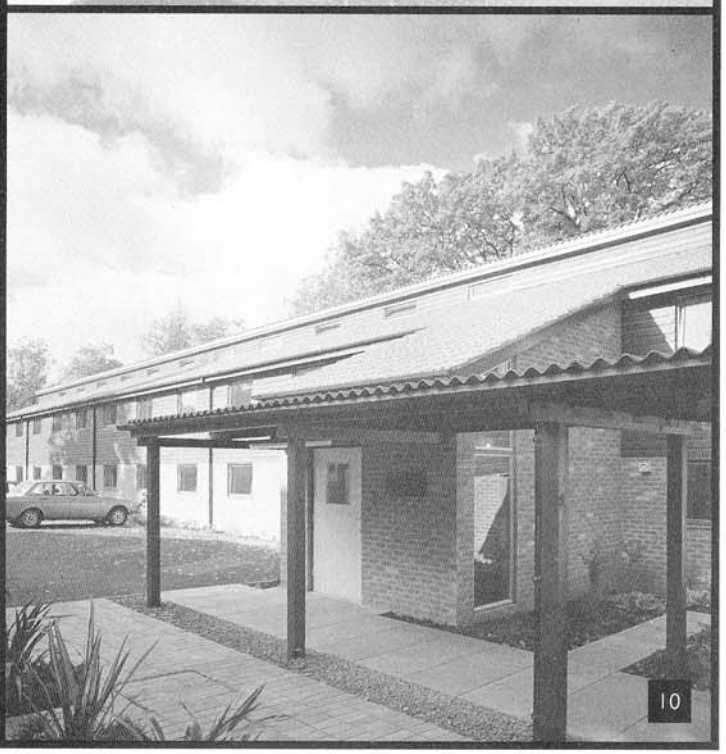

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RECENT WORK

At Saltaire, a re-opened station was designed to harmonise with the surrounding conservation area, the entire cost being met by the West Yorkshire P.T.E. Surviving structures showing techniques, use of materials and craftsmanship which would be completely uneconomic if attempted today, have been given a new lease of life at many places, including Glasgow, Huddersfield and Charlbury, while part of the fire-damaged station at Denmark Hill has been sympathetically converted into a pub. At Victoria, office development above the station required treatment for supporting concrete piers which seems appropriate for the erstwhile 'Golden Arrow' terminal and present departure point of the 'Gatwick Express'. Fire damage was also the *raison d'etre* of the new building using traditional materials at Knockholt; the same bricks and timber have been deployed to thoroughly modern effect in the bar at London Bridge. A great deal of time and effort is being spent on breathing new life into Liverpool Lime Street. The stairs are an example of attention to detail; reminiscent of the interior decor on the great liners of the 1930s, one can almost see Fred Astaire and Ginger Rogers dancing down them in a swirl of mist....

What, one wonders, would nineteenth-century railway architects have made of the Seaspeed Terminal at Dover? Giant machines floating on a cushion of air, driven by huge propellers, a functional terminal building made from bright, modern materials, composed in straight, clean, lines.... Probably only Brunel would have understood, and been excited by the prospect.

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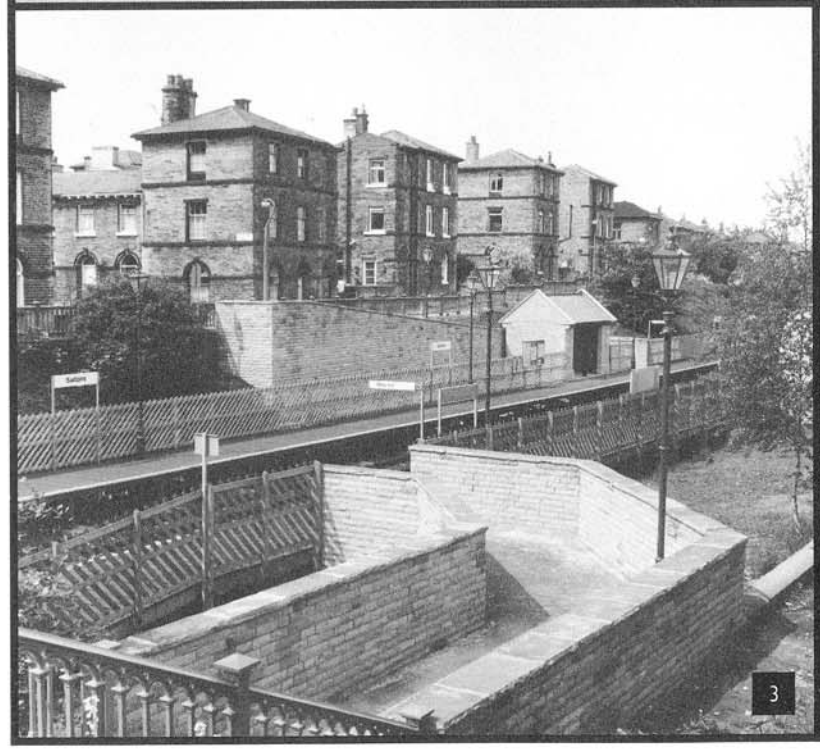
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1. Liverpool Lime Street *R Little*, **2.** Denmark Hill *BR*, **3.** Saltaire *BR*, **4.** Charlbury *BR*, **5.** Victoria *BR*, **6.** Knockholt *BR*, **7.** London Bridge *BR*, **8.** Glasgow Travel Centre *BR*, **9.** Huddersfield *BR*, **10.** Dover Hoverport *L Gibbins*


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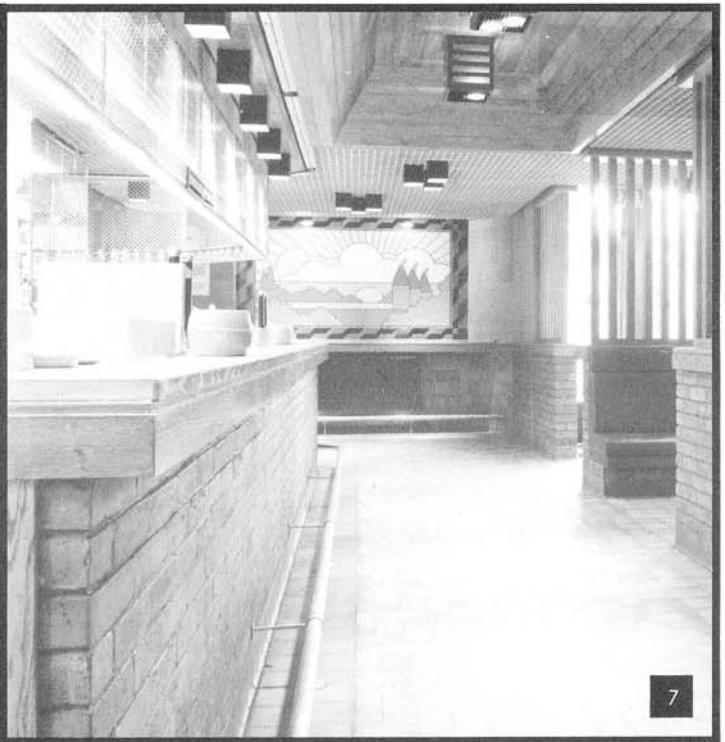
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BRISTOL

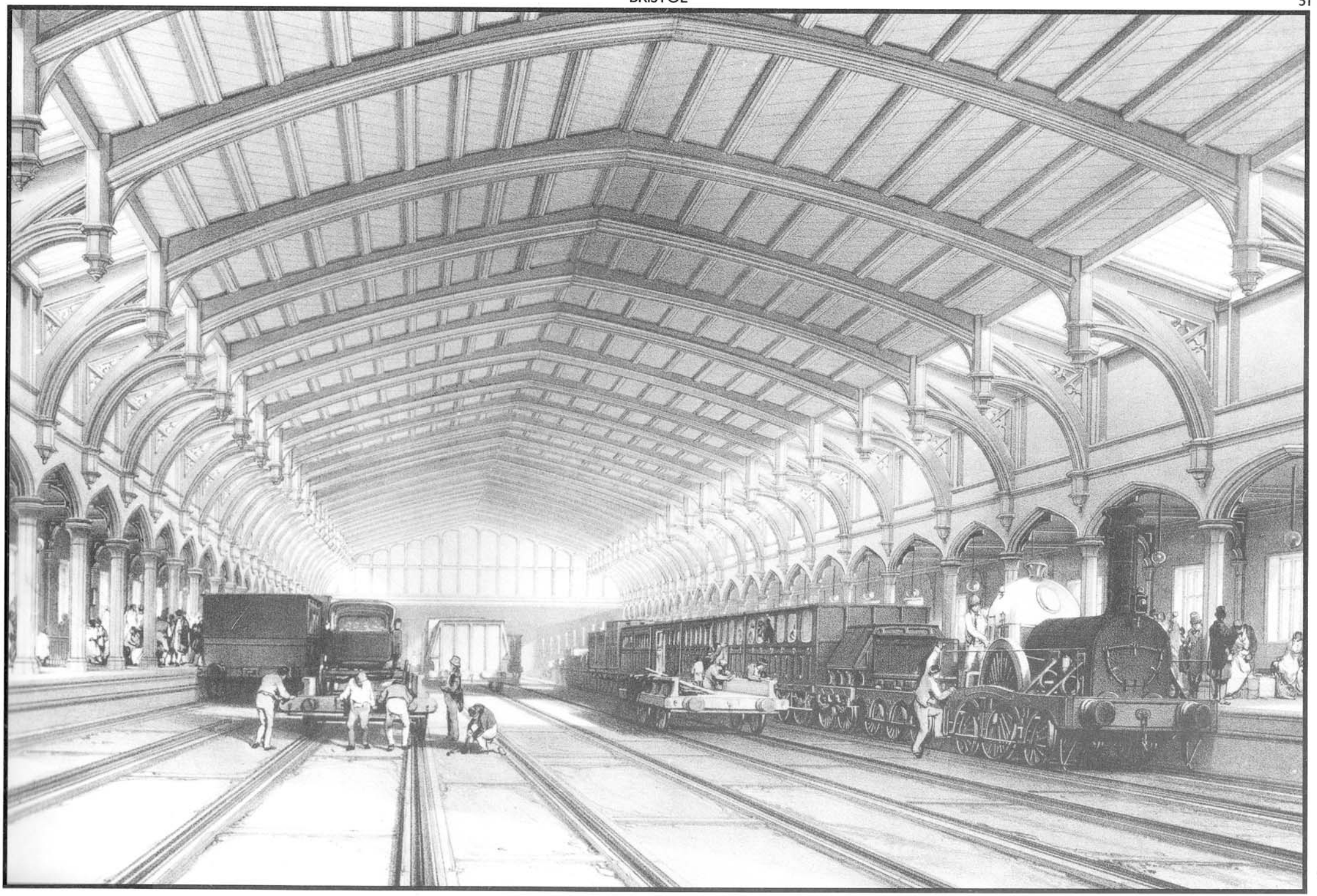
At Bristol one is able to see how the buildings of major railway stations evolved with the survival of the original Great Western Railway Terminus (1838–40), the headquarter building of the Bristol and Exeter Railway (1852) and the joint station which the two companies built with the Midland Railway (1868–1876). This complex covers 13 acres and is the largest group of grade I listed historic railways buildings in the country. The G.W.R. terminus, designed by I.K. Brunel, is the greatest surviving monument to the early railway age.

The Corporate structure of the G.W.R. was unusual in that two committees–one based in Bristol, one in London–formed the board of directors, and each committee was responsible for construction work on its half of the line. The Bristol committee showed a tendency towards extravagence (deplored by their London counterparts) and for many years the Bristol Terminus, completed in 1840, was the showpiece of the line. The Train Shed alone was over 220 ft. long and the 72 ft. clear span of the roof was the wonder of the age. John C. Bourne not only does justice to its cathedral-like splendour in his 1840s lithograph, but left the best description of its novel cantilevered structure: 'it is composed of a series of ribs . . . placed 10 in. apart, each of which is constructed somewhat like the jib of a crane . . . The iron columns which divide the central space from the aisles are the fulcra upon which the arms rest. The long arm or jib extends to the centre of the roof while the short arm is carried backward to the outer wall (and) held down by a strong vertical tie.'

The graceful hammer-beams are purely for decorative effect, and the slenderness of the octagonal columns between the Gothic arches belie their immense strength.

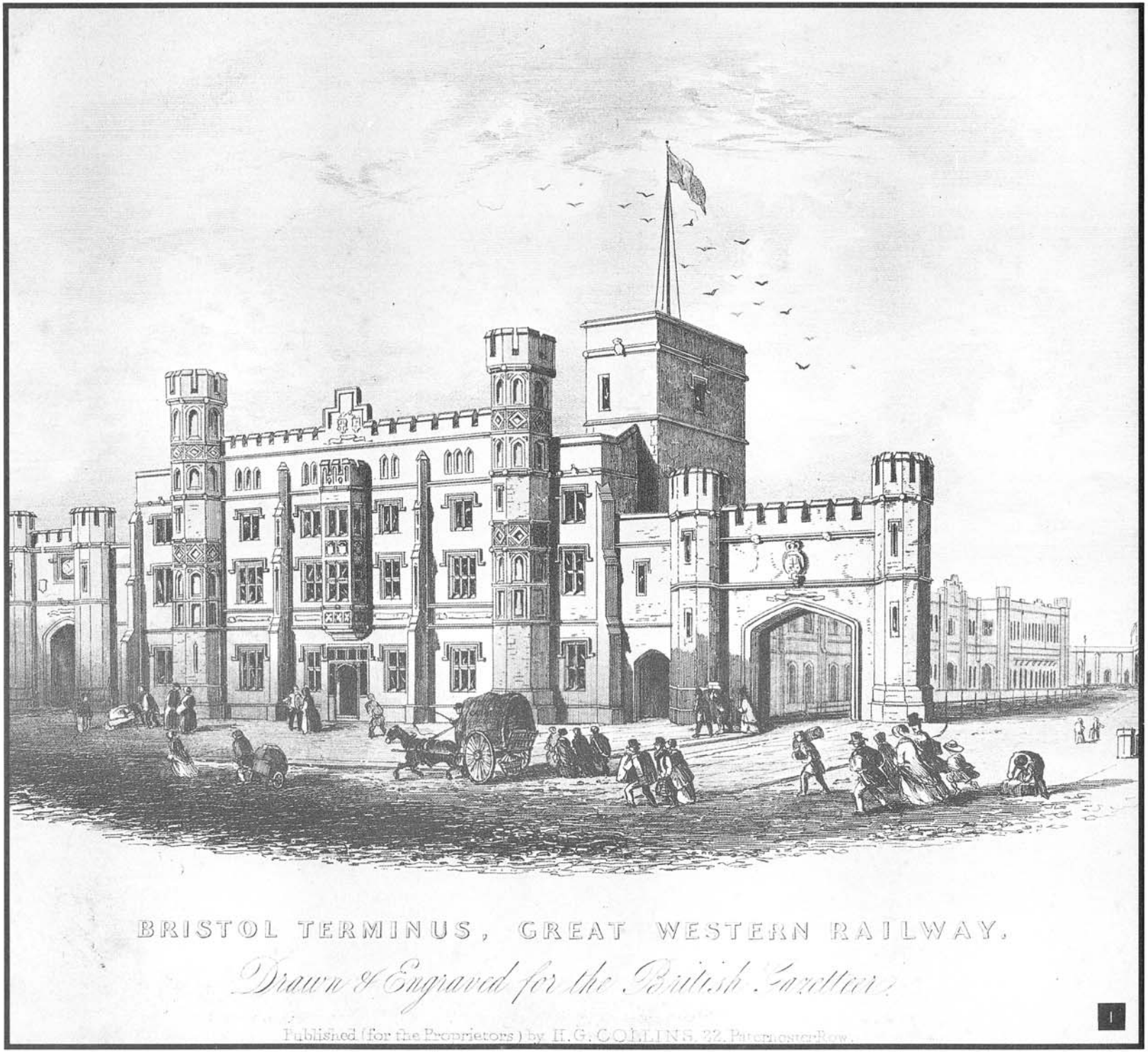
Hemmed in for nearly a century by a raised station approach road on the south side and a railway embankment on the north, it is only in the early engravings that the scale of Brunel's Bristol Station can be truly appreciated. This was the first major terminus to be purpose-built, and shows Brunel's talent for combining function with beauty. It is a remarkable survival.

Opposite: Brunel's Train Shed *CB*



The construction of Bristol Station involved engineering work on an immense scale. The site 'Temple Meads' (water meadows once belonging to Temple Church in the city) was low-lying and subject to flooding from the nearby River Avon. It adjoined the point where the city's 'Floating Harbour' and the tidal Avon met. This waterway carried substantial goods traffic and had to be bridged, which meant that the level of the track into the station was to be 15 ft. above the natural ground.

Work started in 1838 on the headquarters fronting the street and behind this a series of massive brick arches arose to support the Trainshed. In the vaults this created beneath the tracks, Brunel planned stables, waiting rooms and storage. The fact that the vaults were constructed before the design of the superstructure was finalised can be seen by comparing the line of the Gothic windows and doors on the outside with the arch of the vaults inside. They are simply curtain walls and have no connection to the vault structure. Next to the passenger station a goods station was built with its own dock and wharfs to integrate the railway with the Port of Bristol. Amazingly, the entire complex was finished within two years.



1. The Original Bristol Station *CB*, **2.** Brunel's Office Block *BR*, **3.** The Engine and Carriage Shed *C Dalton*, **4.** Vaults Beneath Track Level *BR*, **5.** The Original Public Entrance *P Simons*, **6.** Brunel's Train Shed *BR*, **7.** Train Shed Showing Traverser *P Simons*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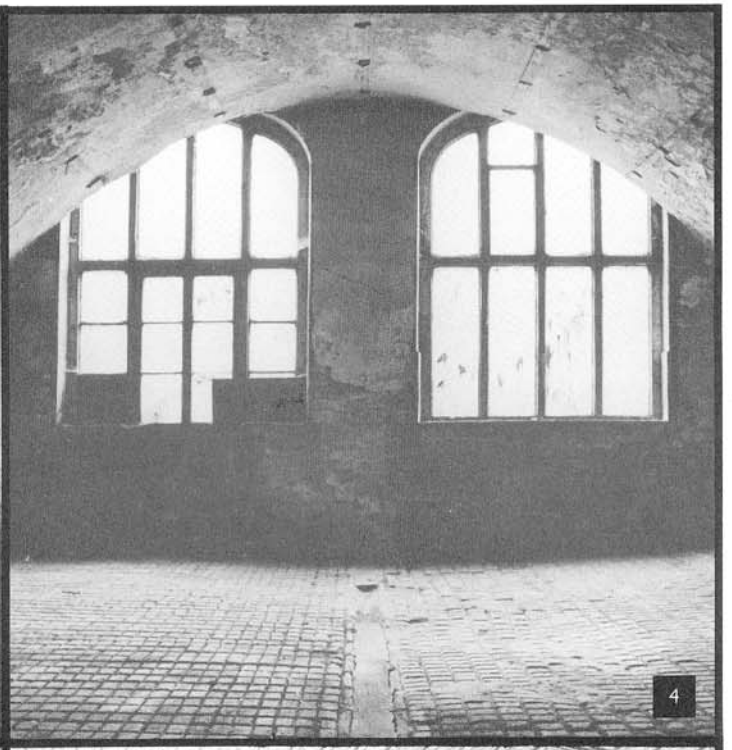
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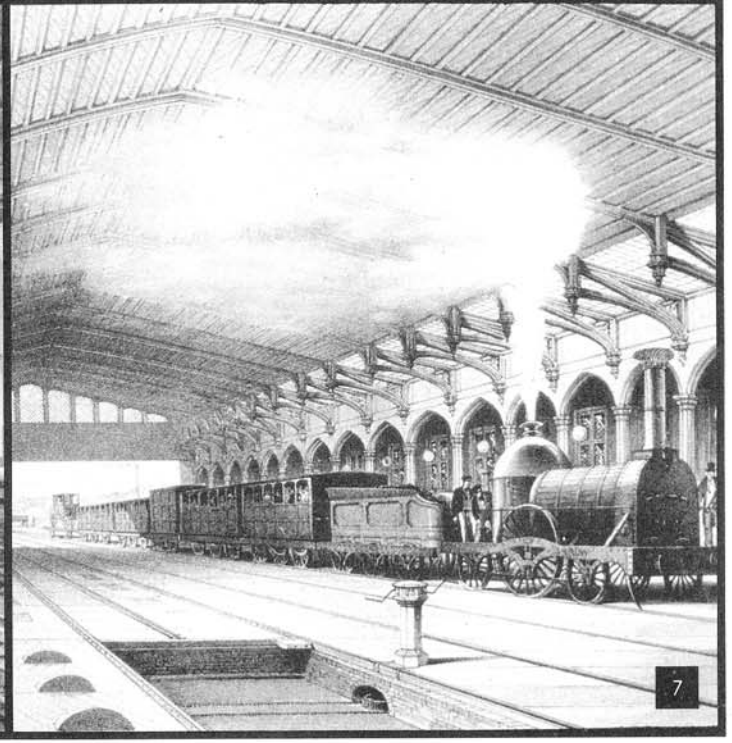
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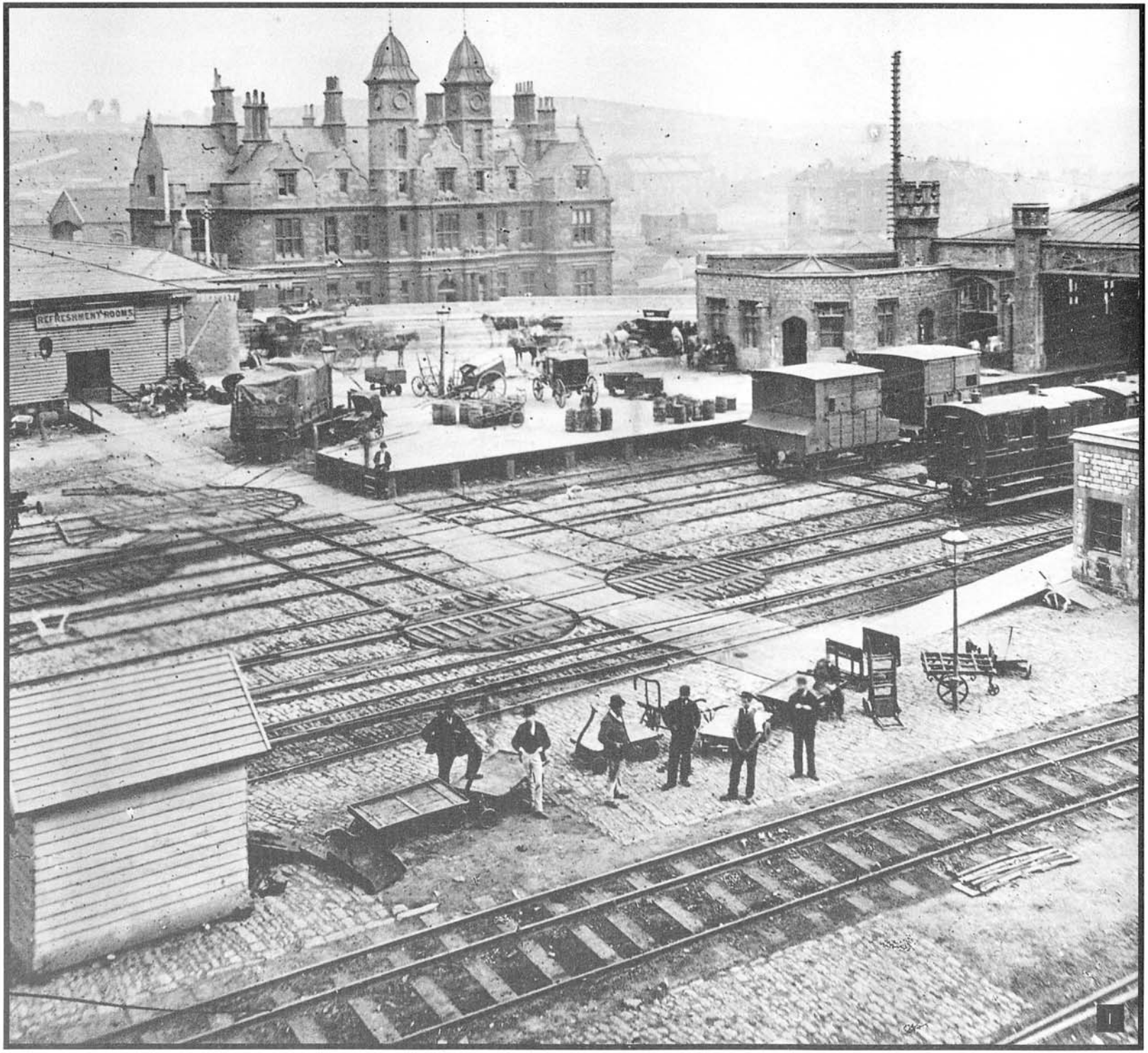
This 1860s photograph was taken from the vantage of one of the goods station towers which housed a counterbalanced mechanism to raise and lower goods wagons to the depot level, 15 ft. below that of the main terminus. Looking south it shows the Bristol and Exeter Railway Company's Jacobean style headquarters built by Fripp in 1852 as a contrast to the tudor-gothic of Brunel's Station. To the right is the end of Brunel's G.W.R Trainshed.

The G.W.R. headquarters on Bath Road offered accommodation on three floors: at the top lived the station superintendent, on the ground floor the company clerk; it was only the first floor which was used for company business. The expensive embellishments reflect the G.W.R.'s grandiose house style, deliberately archaic and designed to impress both shareholders and the public at large with the G.W.R.'s financial solidity and permanence.

The handsome board room was no longer needed for its original purpose and was demoted to more humble offices. The entire Brunel Station was soon to be similarly relegated by the 1870s expansion into a backwater at Temple Meads. Although the offices remained in use by B.R. until the 1970s, their obscurity has fortunately led to the preservation of many fine original features which in a more prominent position would, no doubt, have been modernised.



1. Bristol and Exeter Railway Headquarters *CB*, **2**. Boardroom Pendant *P Simons*, **3**. Boardroom Fireplace *P Simons*, **4**. Boardroom Doors *CB*, **5**. Gargoyle on Watertower *P Simons*, **6**. Hammerbeam Decoration *C Dalton*, **7**. Repairs to Stonework *P Simons*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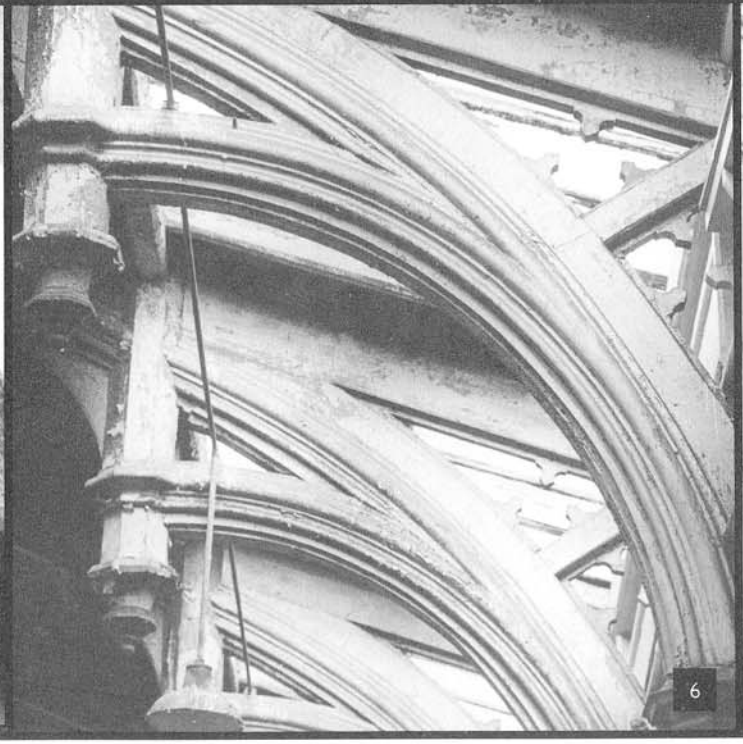
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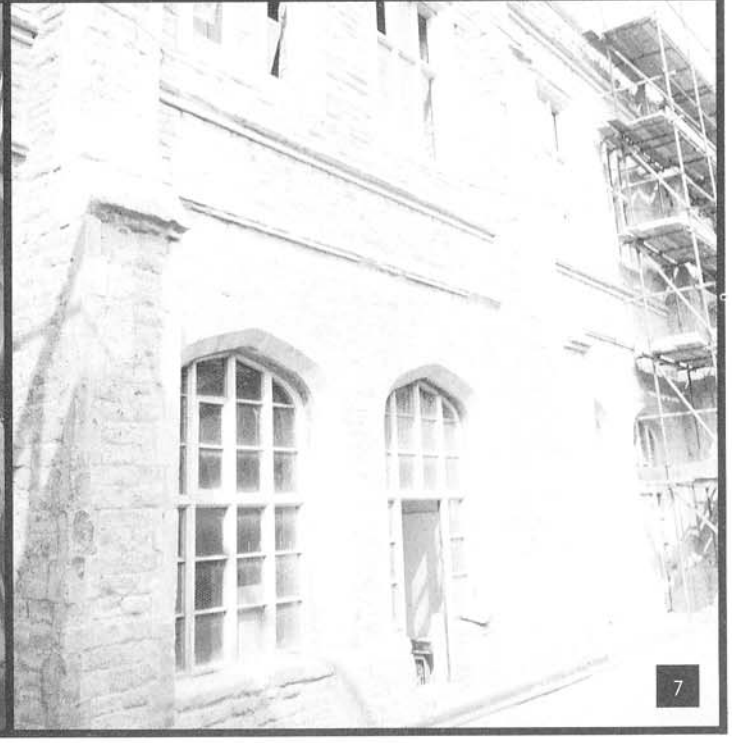
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'Bristol Old Station' is now being rescued by the Brunel Engineering Centre Trust with the active support of British Rail, the Historic Buildings Commission, the Manpower Services Commission –who supply a permanent labour force of over 100 people–and many supporters within the private sector. The extent of the task to repair and convert the building is plain to see but it is planned that the Brunel Centre for engineering works of the past, present and the future will be completed by the end of the decade.

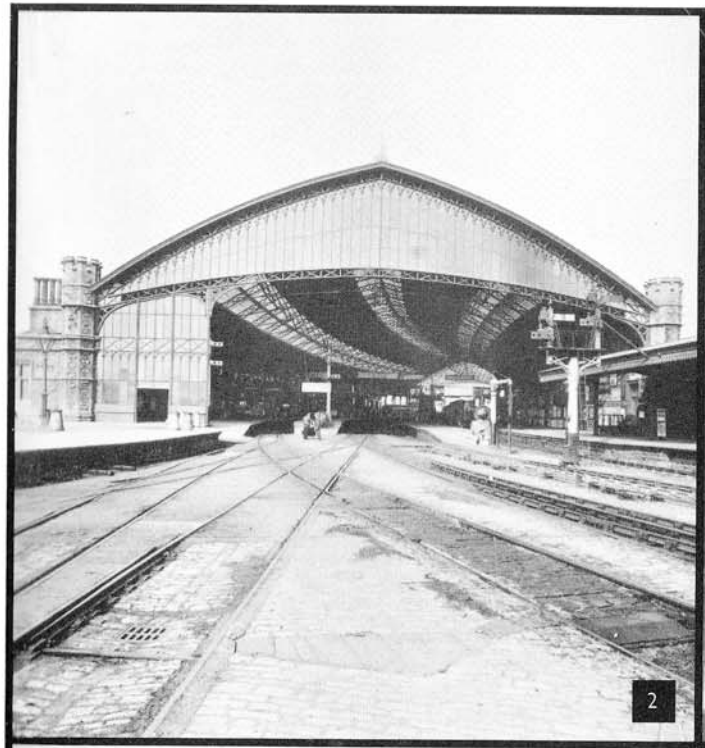
Sir Matthew Digby Wyatt, who had collaborated with Brunel in the 1852 design for Paddington Station, was entrusted with the 1870s expansion of Bristol Temple Meads. The Midland, Great Western and the Bristol and Exeter railways all needed more accommodation.

True to the spirit of his old friend, Digby Wyatt built a magnificent Gothic edifice with an exuberant touch of French château crowning the clock tower. His Midland Shed extension to Brunel's Trainshed maintained this style and the iron tie bar construction of the roof is a marked contrast to Brunel's. The booking hall was the focal point of the new station facing down the inclined approach road with a massive new trainshed constructed behind.

Further expansion of the station in the 1930s utilised chocolate and cream-coloured glazed tiles for finishes. The Great Western had not lost its good taste and externally kept to a gothic style, it was not the same style but the G.W.R. was maintaining style.

This last great phase of construction created the Temple Meads as we now know it. The architect in charge of these works was P. E. Culverhouse and the development provided new through-platforms –to the right of the main station roof, four platforms in the old terminus, new subways and refreshment rooms, a complete re-signalling with a new goods depot and the rebuilding of the old Bristol and Exeter locomotive works completing the picture–a period of massive investment.

1. Bristol Joint Station *CB*, **2.** The Joint Train Shed *BR*, **3.** Train Shed Interior *T Nicholls*, **4.** Aerial View of Temple Meads *J Cottignies*, **5.** Extended Joint Station 1935 *Veale & Co.*, **6.** New Power Box 1935 *BR*, **7.** Bristol and Exeter Building *CB*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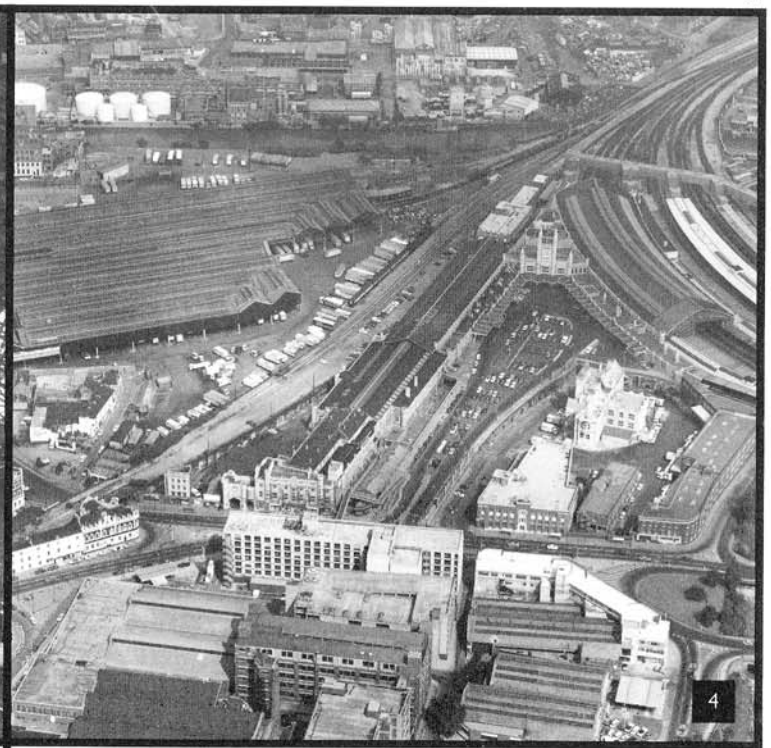
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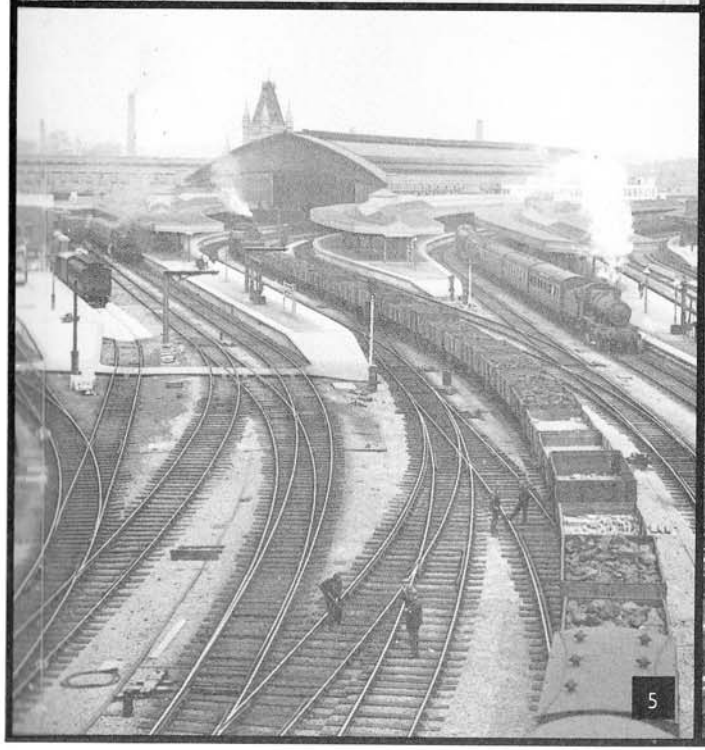
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YORK

The first station in York—a temporary affair outside the city walls—was opened by the York and North Midland Railway in 1839. This had a short life, being replaced by the G.T. Andrews-designed terminus within the walls in 1841. By the time that the Y. & N.M. was absorbed into the North Eastern Railway, in 1854, Andrews' station was already proving inadequate. Planning started for a new through station, but for financial and other reasons this had a lengthy gestation period. No less than three architects (Thomas Prosser, Benjamin Burleigh and William Peachy) were successively involved in developing the project. Consequently, when opened in 1877, certain design features of the new station were already obsolete, although the result was still a '. . . majestic structure built on a sweeping curve.'

York is a fine example of a station which has grown and changed to meet public and operational needs.

Early photographs, with their long exposures, of necessity show the station at quiet periods. However, even with 13 platforms (all but two of which were bays) York was busy enough by 1900 to warrant the main platforms being given wooden extensions beyond the trainshed. Additionally, a new platform (the present No. 14) was constructed outside the massive curtain walls of the station. Subways linking the main platforms were supplemented by a footbridge at the same time. In 1909, the wooden platform extensions were rebuilt in more permanent form, while the present platforms 15 and 16, built with government funds intended to alleviate unemployment, were added in 1938. The present signal box, all but hidden from public view was opened in 1951, using equipment which had been bought, or ordered before the outbreak of war in 1939.

York is a major tourist centre, and the station handles thousands of summer visitors, race traffic, school parties and special events like the 1982 papal visit. Considerable quantities of parcels postal and newspaper traffic are also dealt with.

Booking facilities were originally provided by two matched, wooden offices, looking rather like rows of confessionals, on the north and south sides of the outer concourse. These were replaced by a single glass fronted office on the south side in the 1930s. On 29 April 1942, this office was badly damaged in a German air raid, which also virtually destroyed the roofing panels over the southern end of the train shed. The Booking Office was back in action within a few days, but the train shed roof had to wait until 1949 before money and materials were available. The roof covering provided at that time was replaced in 1983.

Opposite: York Station, South End *BR*

The rebuilt 1930s Booking Office was swept away in early 1984, as part of a comprehensive scheme to improve passenger and staff facilities.

The cast-iron decorations applied to the columns and girders of the train shed roof, are one of the most notable features of the original design. The cast-iron columns are crowned by elaborate capitals of acanthus leaves, cast in sections and bolted into position. The spandrels of the wrought iron girders supporting the transverse roof ribs enclose a design featuring the White Rose of York, with the badge of the North Eastern Railway. There are over a hundred of these still surviving, and when the station was new, each was picked out in the appropriate heraldic colours. As part of the 1900th Anniversary celebrations of the city in 1974, York Civic Trust paid for those adjacent to the station entrance and the footbridge to be repainted in the original style. Since then, the Trust has maintained a close and constructive interest in the work of refurbishment.


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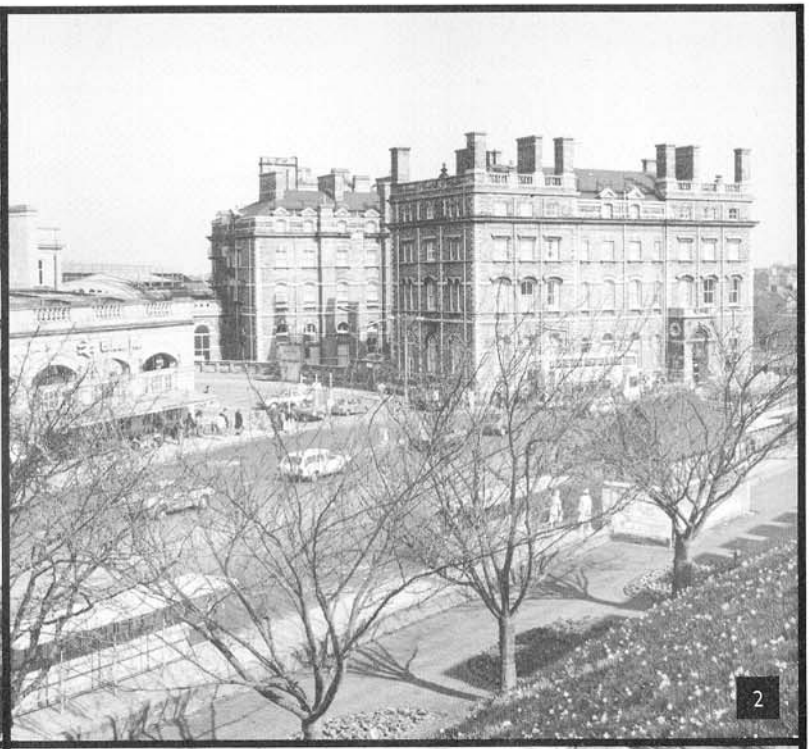
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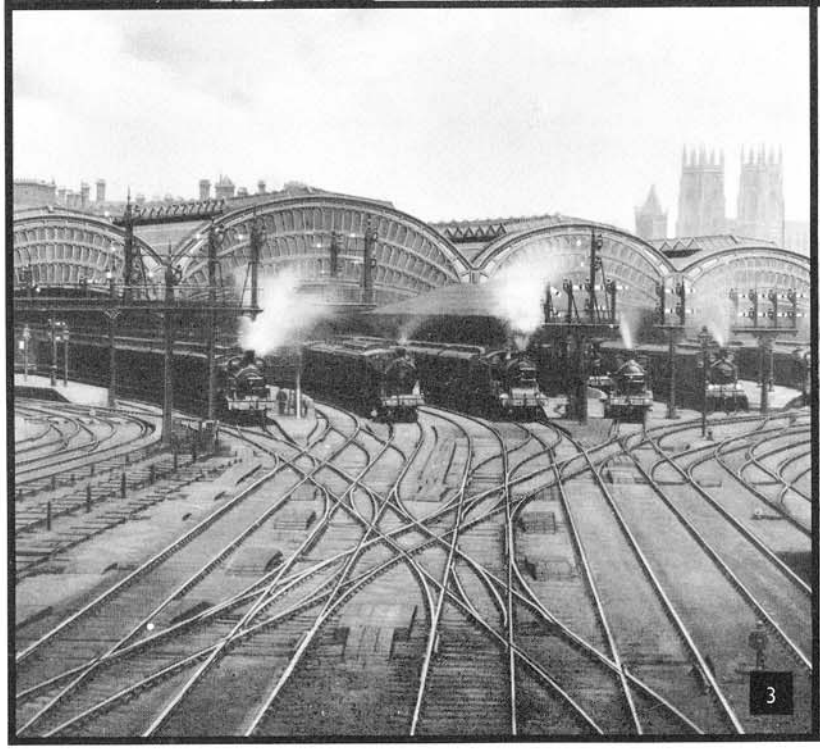
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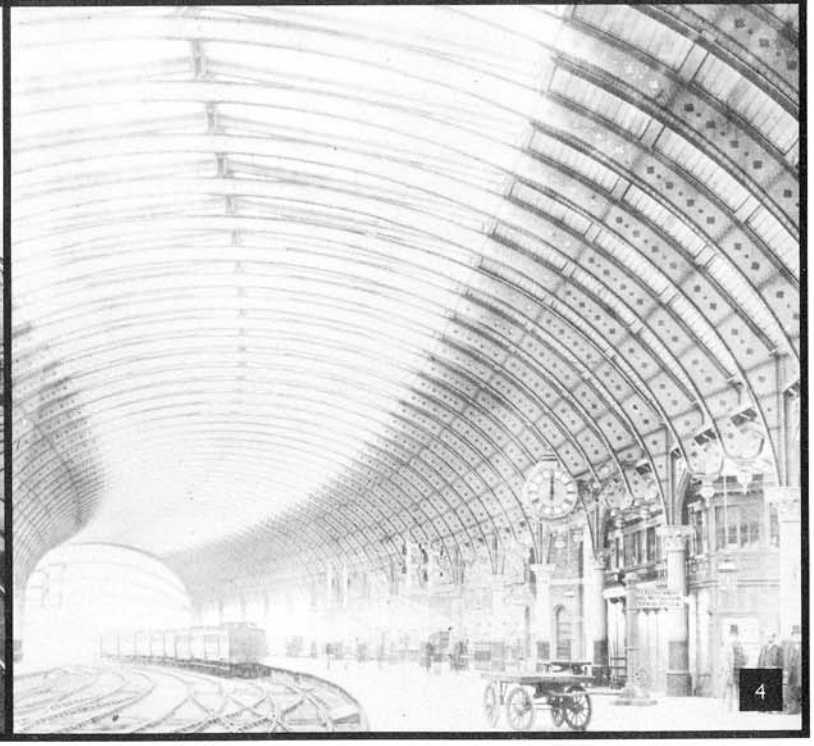
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1. Newspaper Traffic *BR*, **2.** York Station Hotel *BR*, **3.** York in the Heyday of Steam *NRM*, **4.** York Looking North *BR*, **5.** The Original Booking Office *BR*, **6.** Bombed Booking Office *BR*, **7.** Heraldic Crests *BR*, **8.** Bomb Damage 1942 *BR*, **9.** New Station Roof *BR*, **10.** Exterior of Roof *BR*


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Train movements in and around York were originally controlled by a number of mechanical boxes. Some of these were rebuilt, moved or extended as traffic grew and the station was enlarged. A 1930s scheme to install colour-light signals and electropneumatic points was delayed by the war, finally reaching completion in 1951. The new box controlled over 30 track miles, and replaced seven mechanical boxes.

The platform box, stripped of its equipment, is the sole survivor. Provision for a bookstall at ground-floor level was made when the station opened; subsequently this was extended into the concourse. In conjunction with W.H. Smiths, the building was recently restored, and the ground floor rebuilt as a walk-in shop.

In 1984 a major refurbishment scheme was carried out at a cost of £950,000. This provided a new travel centre, and restored much of the inner concourse south wing, which had been devastated in the 1942 raid. York Station is a grade II* listed building, and considerable care was taken in producing a scheme which was not only in keeping with the surviving original structure, but would enhance it. For example, some 80,000 bricks, the best possible match in size and colour to the originals, were specially made. Additionally, although money was not available to restore the first floor of the south wing, suitable concrete roof beams were installed, so that this could be done at some future date. A further considerable improvement has been the laying of terrazzo flooring throughout the concourse areas.

While this work was being carried out, temporary booking, information and staff accommodation was provided in examples from the ubiquitous Portakabin range.

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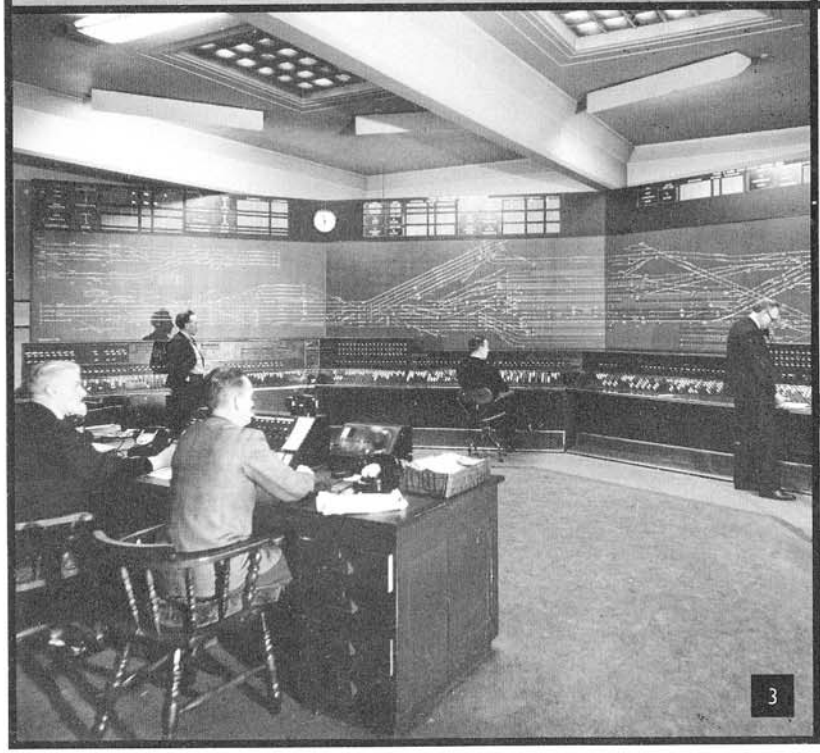
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1. The Original Bookstall *BR*, **2.** The New W H Smith Shop *BR*, **3.** Signal Box Interior *BR*, **4.** Old Signal Boxes *BR*, **5.** Temporary Booking Offices *BR*, **6.** Renovation Work *BR*, **7.** Old Ticket Office *BR*, **8.** New Ticket Office *BR*, **9.** Preparation for New Roof *BR*, **10.** Installation of Roof Beams *BR*

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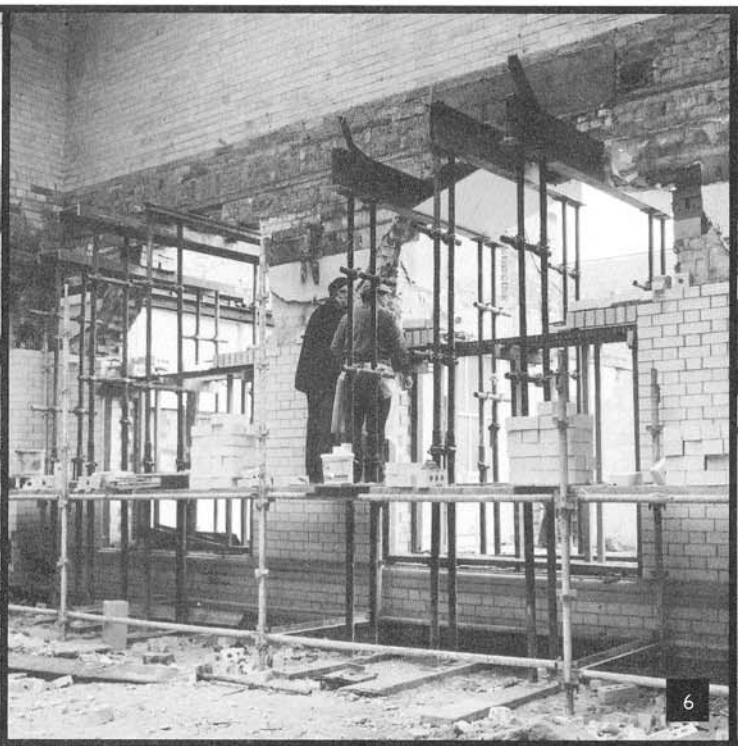
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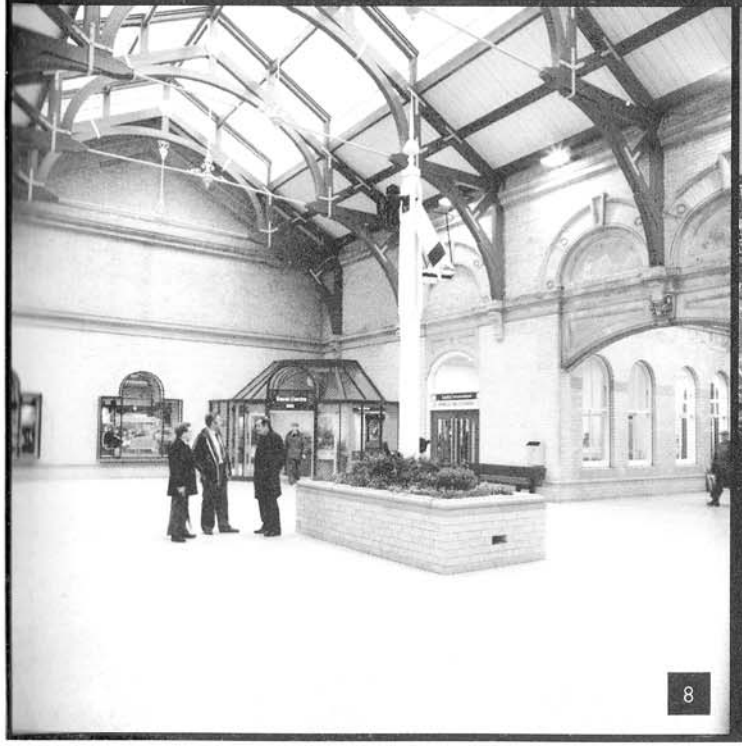
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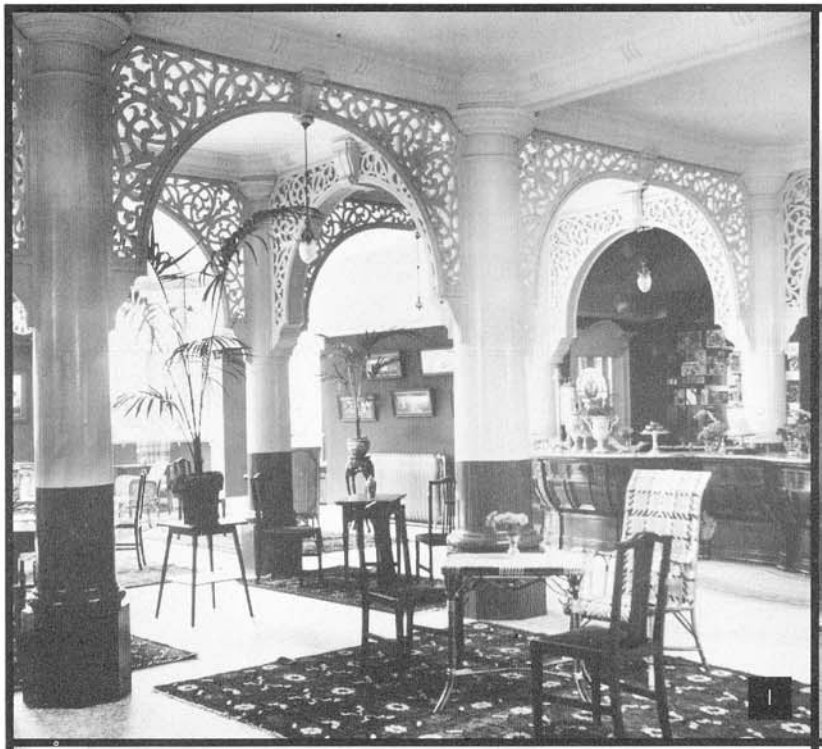
In response to contemporary taste, the North Eastern Railway opened a splended *art nouveau* tea room adjacent to the present Platform 8. With bamboo furniture, potted palms and leaded light windows, it was a marvellous evocation of the Edwardian afternoon tea ritual. The only thing missing was a string trio of black bombazine-clad elderly spinsters, sawing their way through excerpts from *The Merry Widow*....

During both world wars, the building saw service as an armed forces hostel and canteen. During peace-time, until the early 1970s, the old Tea Room was used as a staff canteen, run by a committee elected by the various grades employed on York Station. After a period of disuse, it was the home of 'curio corner' selling 'railwayana', and then British Rail's club for young people, 'Rail Riders', took out a lease in 1983, Now rechristened 'Rail Riders World', the old Tea Room houses one of the biggest model railways in Britain.

While the model was under construction, the building was refurbished both internally and externally. The external elevations have been restored to the original designs. The surviving stained glass cleaned and repaired, while replacement glazing installed over the years has been removed. Replica leaded lights of correct size were substituted.

In the Association of Railway Preservation Societies' Best Restored Station competition of 1984, the scheme was awarded a 'highly commended' certificate.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1. Original Tea Room Interior *BR*, **2**. Original Exterior *BR*, **3**. Exterior Prior to Renovation *BR*, **4**. Renovated Exterior *BR*, **Inside Back Cover:** York Architects' Outing, 1889 *BR*

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Building Centre, London, February and March 1985
Brunel Train Shed, Bristol (G.W.R. 150 Celebrations), July 1985