The Landmark Trust

THE STATION AGENT'S HOUSE

History Album

The Liverpool Manchester Railway in front of the Station Agent's House, 1831

Caroline Stanford

May 2024

The Landmark Trust Shottesbrooke Maidenhead Berkshire SL6 3SW
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BASIC DETAILS

Built:	**1808, for John Rothwell, dyeworks master**
Listing:	**Grade I group value**
Landmark tenure:	**Management agreement with The Science & Industry Museum**
Opened as a Landmark:	**May 2024**
Landmark project manager:	**Linda Lockett**
Restoration architect:	**Andrew Wiles of Wiles & Maguire Ltd, York**
Main contractors:	**Walker Conservation Specialists Ltd of Manchester**
Structural engineer:	**Brian Jones of Bingley**
Services engineer:	**Watt Energy, WE & CE Limited of Manchester**
Quantity Surveyor:	**Richard Thompson of RST Consulting**

Acknowledgments

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We are hugely grateful to the 487 supporters who gave so generously to make the restoration of Station Agent's House possible. They include:

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Mr R Broyd CBE, Dr J and Mrs J Bull, Mr M Caporn, Mr A Dean in memory of the late Carol Dean née Slide, Mr B Foord, Dr C Guettler, Mr M and Mrs C Seale, Mr M and Mrs S Simms, Mr P Ticer, Mr K White

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Thank you!

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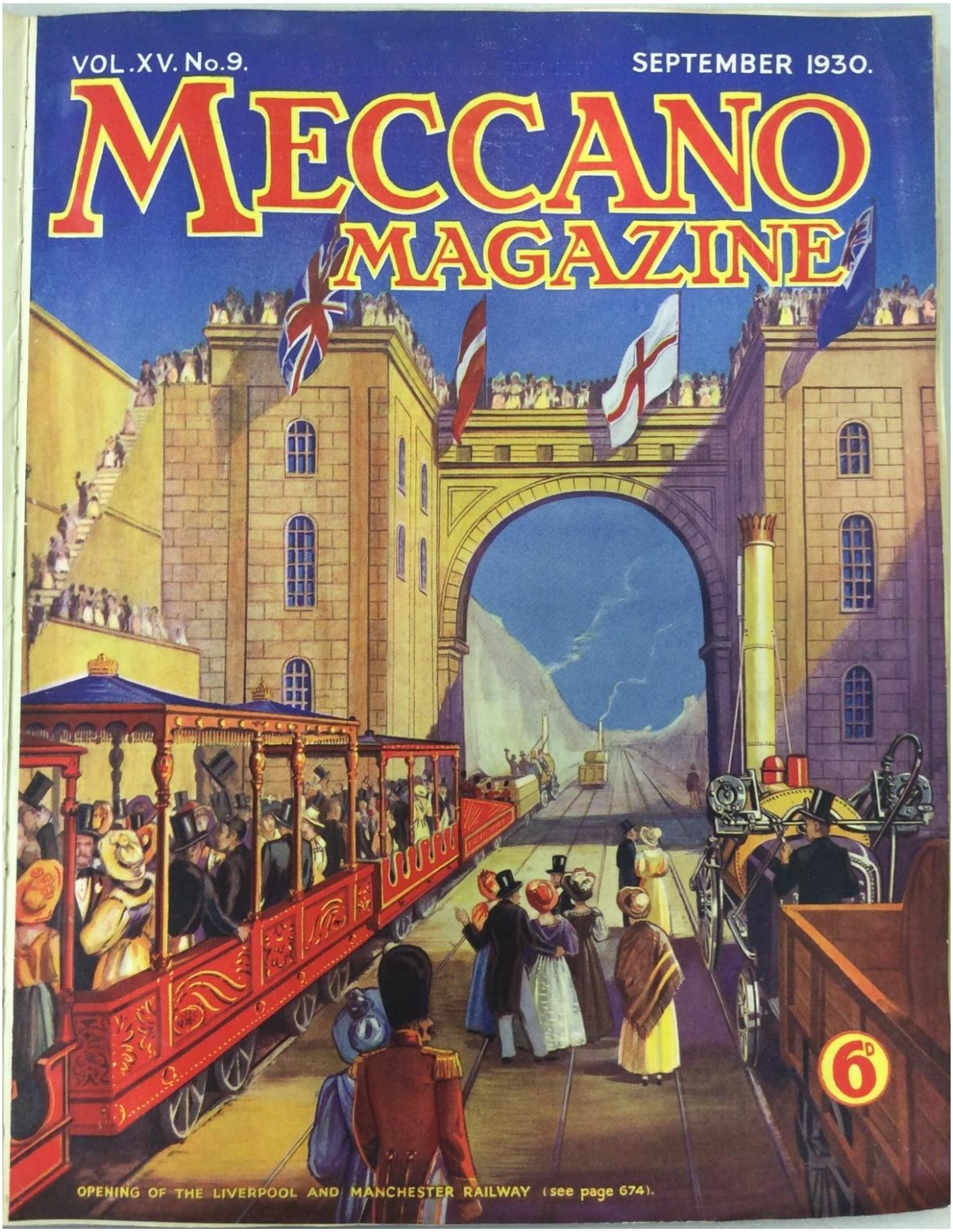
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OPENING OF THE LIVERPOOL AND MANCHESTER RAILWAY (see page 674).

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Railway Abbreviations

BR	British Railways
GJR	Grand Junction Railway
LMR	Liverpool & Manchester Railway
LMS	London Midland & Scottish Railway
S&D	Stockton & Darlington Railway

The Station Agent's House in 2024, on the corner of Liverpool Road and Water Street. The 1830 Coach Offices/Passenger Building runs alongside it to the right; to the left, the 1905 replacement for George Stephenson's Water Street road bridge is a continuation of the Irwell viaduct, and carries the track to the former high-level passenger platform behind the house.

Summary

This simple but well-made house was built in1808 for dyemaster John Rothwell, a partner in the Rothwell & Harrison dyeworks nearby on Water Street.
The site now lies within the Castlefield Conservation Area, named after the four forts the Romans built here because of the road and river connectivity that the Liverpool Manchester Railway (LMR) also exploited. The Rivers Irwell and Medlock run nearby, feeding into the Mersey. In 1765, the Bridgewater Canal reached Castlefield. The area became a major transhipment point, as a variety of industrial premises developed along the canals and rivers.

The 1820s became a time of frenzied jockeying, as entrepreneurs tried to work out how to maximise the potential of steam as a form of transport. The very first steam railway was the Stockton-Darlington line, which opened in 1825, primarily to carry coal although a few passengers also rode behind the outgoing engines. In the early 1820s, the Liverpool & Manchester Railway Co (LMR) was formed, initially under the supervision of steam engine pioneer, George Stephenson. By then, the only vacant land in Castlefield was a small area bounded by Charles Street, Water Street and Liverpool Road, and two buildings. One of these was at (then) 41 Liverpool Road, as built for John Rothwell in 1808. The land acquisition was a complex process, involving Acts of Parliament as well as persuading the Bridgewater Canal Company that the railway was a desirable development. The LMR deal was finally completed in February 1829.

John Rothwell's well-placed, handsome house on the corner of Liverpool Road and Water Street then became the home of the world's first Station Agent, Joseph Green, the anchoring 'pin' around which all the rest of the station developed. It is a three-storey corner house with basement. It is trapezoidal in plan with a one-bay extension to the rear, where there is a service yard. The main façade of the house is dominated by the front door (today a 1980s restoration faithful to the original), standing between stone Doric columns beneath a stone pediment, and has large sash windows.

Through 1830, a viaduct and bridge were built by George Stephenson behind the Station Agent's House to bring the 31-mile track to the passenger platform, and a large warehouse was built on the other side of the track. In June 1830, construction began of the Coach Offices, soon known as the Passenger Building, next to the Station Agent's House. Its architect is unknown. This had two lofty booking halls at street level, one for first-class passengers and the other for second-class, and two corresponding waiting rooms on that building's first floor at rail level, giving onto the world's first passenger platform. A short metal footbridge leads out from the second floor of the Station Agent's House directly onto this now disused railway platform, the track becoming a highline walkway.

The line's grand opening took place on 15 September 1830, attended by the Duke of Wellington but disrupted by Liverpool MP William Huskisson's tragic demise: he fell into the path of *Rocket*, was run over and died the same day.

T. T. Bury's depiction of the scene at Liverpool Road Station in 1830. The Station Agent's House is on the right hand edge. A train has just pulled onto the arrivals platform; passengers (and/or livestock) then had to make their way down to street level via the ramp. The twin arches are a water tower, with a steam driven pump to raise the water, for replenishing the engines. The Irwell rail viaduct is in the background, and the original cast iron bridge runs over Water Street behind the house, supported by cast iron Doric columns. The blocks of stone in the middle ground show that the station is still a work in progress.

Despite this inauspicious start, the railway was an instant success and other buildings and warehouses sprang up all around. In 1844 the line was extended to Manchester Victoria Station, which now became the passenger terminus, leaving Liverpool Road as a major freight depot. Joseph Green was succeeded as Station Agent by Edward Norden (by 1851) and Thomas Kay (by 1861), career railwaymen who also lived in the house with their families. By the 1870s, however, the house was rented to non-railway tenants; in the 20th century, the ground floor was converted into a shop, selling at various time sausages, car parts and perhaps more. The freight depot declined after the war, and in1975 British Rail closed the line.

In 1980, the 250th anniversary of the railway's opening, a trust was formed to regenerate the area with a new museum, today the Science & Industry Museum. The museum chose Station Agent's House for their first offices and carried out a comprehensive restoration in the 1980s. They removed the mid-20th century shop fronts and recreated the original fenestration and doorcase (the blind upper storey windows were blocked by 1830). This returned the exterior of the building to much as it was in the early 1800s, while the interiors were fitted out for office rather than domestic use. Once newer offices came along, its size and layout made it unsuitable for gallery use. The museum turned to Landmark for help.

Externally, the only substantial change Landmark made was to create a new disabled access at the back, linking to an easy access bedroom and bathroom on the ground floor. A lift has also been installed, ensuring everyone has access to the large first floor living space.

Internally, the run-down building needed to be refreshed and upgraded for 21st-century use. We have done everything possible to make this Regency brick building efficiently and sustainably warm. An air source heat pump supplies heating and hot water use. The draughty 1980s single-glazed sash windows were replaced with bespoke double-glazed sash frames. Chipboard floors were removed and new redwood pine floors installed with good thick boards. The walls are lined with a thick layer of sheep's wool, followed by lime plaster that includes tiny fragments of cork for better heat retention. The staircase is original, its moulded wooden handrail curving up three floors. A new oval skylight was installed in the stairwell, in keeping with the house's Regency origins.

The open plan first floor room has been kept, with its fantastic panorama of the Manchester skyline. Its floor was re-laid in parquet, and new kitchen units put in at one end, with a woodstove at the other and a new hearth stone in local grey limestone. A small cast iron safe built into the external wall has been left in situ. Bathrooms have been installed on all three floors, one with a fantastic view from the bath across the 1830 viaduct. We have chosen not to furnish the house as a Victorian station master's house but rather as the hardy, adaptable dwelling it has always been, reflecting each present time. From George Stephenson's time onwards, this house has been recognised as a building of substance worth keeping - a lesson in re-use and adaptation to bear in mind in our present day.

A Timeline for The Station Agent's House

DATE	EVENT	RAILWAY COMPANY IN CHARGE
1808	House built for John Rothwell, partner in Rothwell & Harrison's dyeworks on Water Street.	
5 May 1826	Liverpool and Manchester Railway Act passed	
Feb 1829	6,000 sq yards in Castlefield incl house bought for £10k by LMR for the railway terminus.	LMR (Liverpool & Manchester Railway)
June 1830	Coach Offices built (ticket offices and waiting room), also the Irwell Viaduct.	
15 Sept 1830	LMR opening. MP William Huskisson killed by *Rocket* en route. Joseph Green is station agent, living with daughters & a son.	
1830	1830 Warehouse built across the track from the Station Agent's House, the world's first purpose-built warehouse for goods shipped by rail.	
1831	Architect Thomas Haigh commissioned to extend goods facilities: Cotton Warehouses 1 & 2. Link bridges to move trucks (see 1850 OS map for locations).	
1837	Green admonished by the Board for not having enough men enrolled in the benefits club after a strike.	
1839	Robert Owen laid foundation stone for Castlefield's Hall of Science, operational by 1840.	
1842	Chartist Plug Riots. Resistance to wage cuts in the mills.	
1841	Census, Joseph Green is c65, still living here with his family.	
1844	Passenger service transfers to Manchester Victoria at Hunts Bank. Liverpool Road now freight only.	
1845		GJR (Grand Junction Railway)
1846	Amalgamation of LMR, GJR and London & Birmingham (L&B) and London & North Western (LNWR).	LNWR (London & Northwestern Railway)
1851	Census: Edward Byron Norden occupying as 'agent for London North Western', living with mother, grandmother and aunts.	
1853	Campfield Library, Manchester's first Free Public Library opened in a former Hall of Science.	
1853	69 dwellings cleared for extension of station.	
1850s	Possibly a Mr Salt was agent/manager. Thomas Kay was his successor.	
1868	Construction of Bonded Warehouse (for wine and spirits).	
1861	Census. Thomas Kay in residence at 48 L'pool Rd as 'railway manager.' Then 37 (b 1824). Also wife Eliza and stepson William Hamilton (21) and a clerk. House now divided into tenements.	

24 May 1866	Serious fire across several acres of warehouses on the wider site. SAH had to be emptied of contents but survived unscathed (Kay away, alerted by telegraph). Pig station and market built soon after.	
1867	Kay gave evidence at inquest on an explosion (benzole/napatha) ignited by a guard's lamp on the Brighton Railway - a NWR train.	
1871	Census: no 48 in multi occupation: David Carson b1818 in Ayrshire and family; William Burgess & family; and John Foster and John McMaster, both drapers. Unclear whether now a draper's shop: Carson is a 'travelling draper' in PO Directory of Manchester 1873.	
1871	Pig Landing Station on Charles Street removed for viaduct & bonded stores.	
c1880	First gas lamps at the station.	
1881	Census. David Carson's family now sole occupants.	
1891	Census. Carsons still there, David is 76.	
1893	Completion of Manchester Ship Canal.	
1902	Office areas (only) got electric lighting.	
1904	Demolition of old Water Street Bridge.	
1923		LMR (London, Midland & Scottish Railway)
1947	Transport Act provided for nationalisation.	British Rail
Jan 1, 1948	All railways nationalised.	
1963-5	Beeching reports.	
1963	Station Building listed Grade I .	
1966	Formal institution of North West Museum of Science & Industry	
1969	First museum opened on Grosvenor Road	
1978	Greater Manchester Council accepted the site from British Rail; Liverpool Road Station Society founded.	
1980	150th anniversary of the LMR.	
1978-83	Greater Manchester Museum of Science and Industry (GMMSI) established.	
2018	Rebranded Science & Industry Museum joined the Science Museum Group.	
2024	The Station Agent's House opened as a Landmark.	

Early History of the Liverpool & Manchester Railway

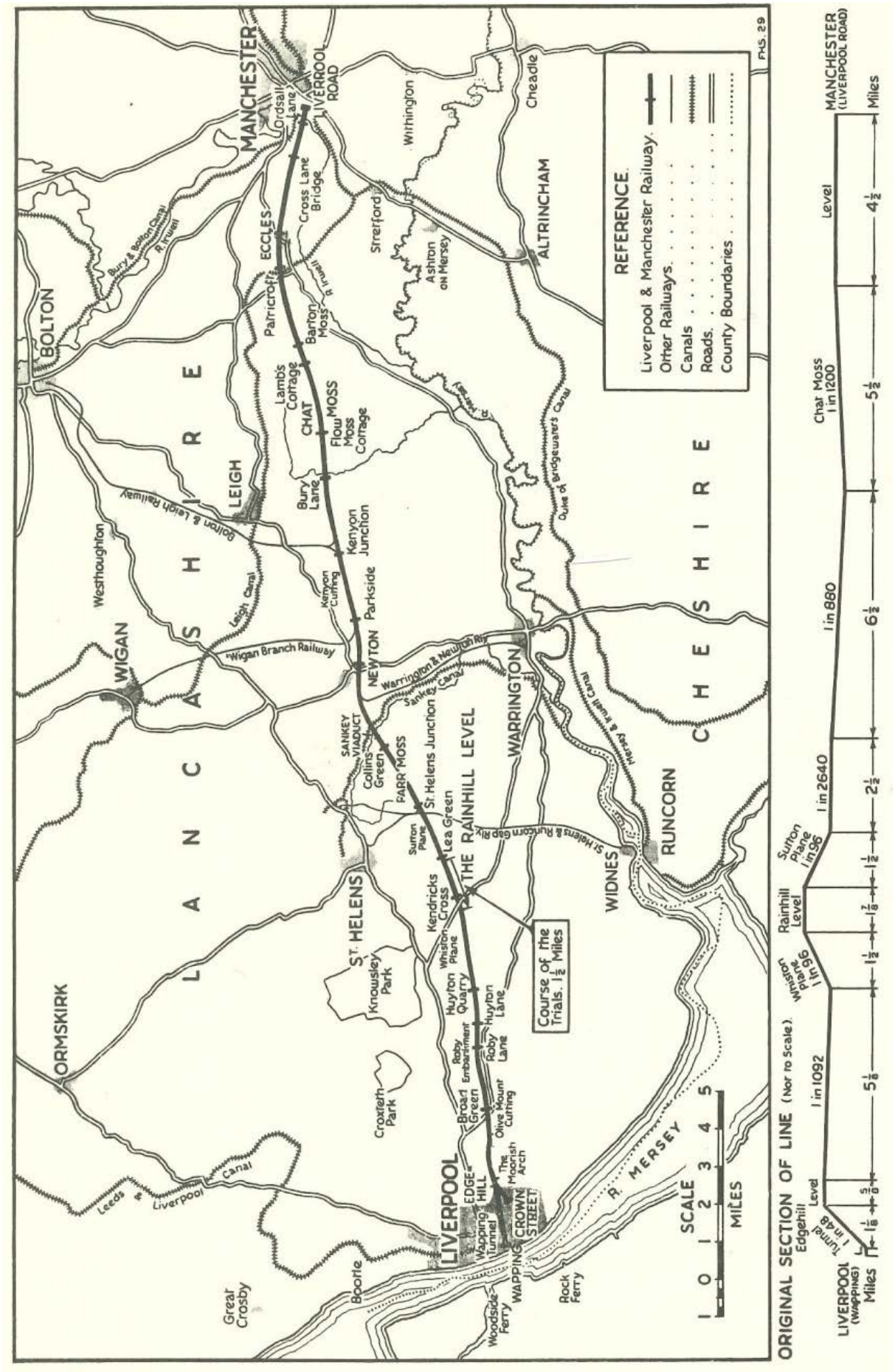
As the birthplace of the passenger railway, this Manchester site played a key role in the history of steam travel. The events that took place at the opening of the Liverpool & Manchester Railway (LMR) are still here, you can smell and feel them in that group of buildings. The creation of the LMR was a long and tortuous business, and much has been written by railway historians on it and the line's subsequent operation. This account will offer no more than an outline of the main events, together with an account of the residents of the Station Agent's house and a flavour of life in 19th-century Castlefield. It inevitably focuses more on the Manchester end of the line, but of course it should not be forgotten that the LMR had an equivalent terminus at Crown Street, Liverpool, operated as a goods yard until 1972, and since re-landscaped as a park. On the track between them were achieved engineering marvels of Victorian infrastructure. The books in the Landmark bookcase provide much more detail on all this for those inclined to seek it out.

Had you been standing on the second-floor footbridge of the Station Agent's House around three o'clock on 15th September 1830, you would have witnessed the arrival of the Duke of Wellington in a train pulled by *Northumbrian* on the inaugural run of the world's first passenger railway. The LMR was not the first steam railway in the world to be built - the Stockton & Darlington Railway (S&D) claims that distinction and opened in1825, and passengers had similarly hitched rides behind Richard Trevethick's very first working railway steam locomotive at the Penydarren Ironworks in Glamorganshire in 1804. However, the LMR provided the first purpose-built passenger rail link between large towns, running for 31 miles from Crown Street Station in Liverpool to Liverpool Road in Castlefield, Manchester (35 miles if you count the sidings). It was the longest track yet laid, the first railway to have twin parallel tracks and the first to run at a carefully engineered gradient that allowed fully loaded trucks and carriages to run in both directions (on the S&D, laden waggons ran downhill under steam power to the

coast, but the empty trucks had to be pulled back up by horses or winding machines, as had been happening for decades on horse-drawn railways).

On this Liverpool Road site, we can witness the railway company working out the infrastructure of what was needed to be such a thing at all – what buildings and facilities were needed, how passenger and livestock flow might work, how the locomotives and tracks were to function, how ticketing and timetables should work, even what vocabulary was to be used for these new resources. The LMR was the blueprint for stations in the first wave of railway development, a key source of inspiration and practical information. Apart from George Stephenson's 1830 viaduct to carry the track over Water Street (replaced in 1904), all the original Liverpool Road Station structures survive – the river bridge, the passenger station and original departures platform, the 1830 warehouse and the Station Agent's House.

Liverpool Road was a passenger station for just fourteen years before turning exclusively to freight, a purpose at least as important as, but perhaps less engaging, than passenger transport. By then, the LMR had already earned its place in history as the world's first purpose-built, inter-city passenger railway. Everything that followed across the world began here, on this corner of Liverpool Road and Water Street.



The Liverpool & Manchester Railway

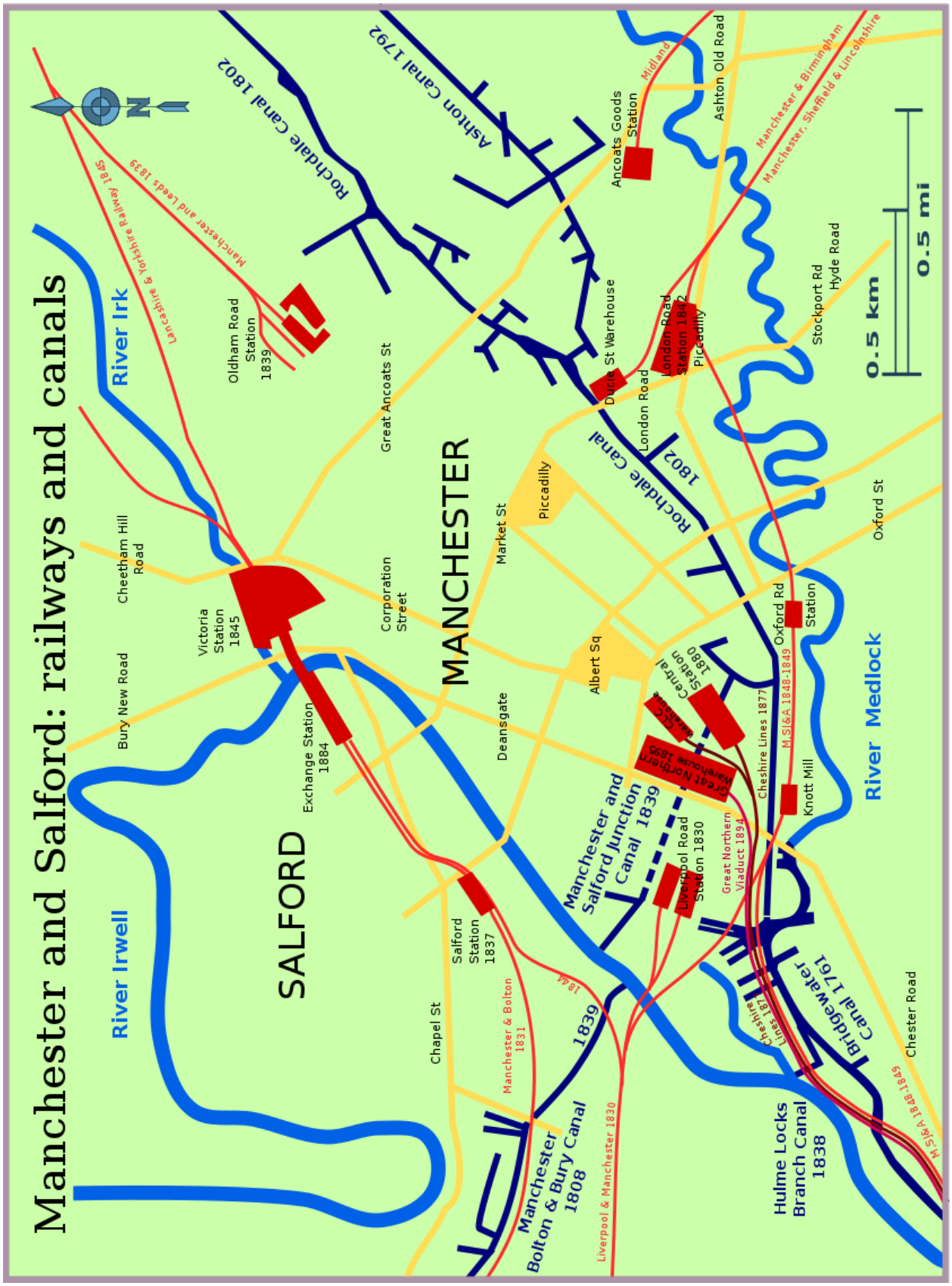
The Origins of the LMR

By the early 19th century, four fifths of all raw cotton entered Britain through Liverpool docks, not to mention livestock from Ireland, imported spice, oil, coffee, tobacco, turpentine, saltpetre, corn and much more. In the other direction, goods from Yorkshire clothiers, Cheshire salt refineries and Staffordshire potteries all arrived for export. Efficient transport into and away from this maritime portal became an increasing bottleneck to expansion, with Manchester the next point of distribution.

Castlefield, named after the four Roman forts built here because of an intersection of roads and the Rivers Irwell and the Medlock, had long been a nexus of transport connectivity.

There were three existing navigation routes through to Manchester in the early 1800s. For passengers, the turnpike road was the only viable route between the two towns and it was well used: by 1825, 22 coaches ran each day, carrying 600 people. This took less than 3 hours along the most direct route at 12 mph, but the turnpike was 'crooked and rough' with an 'infamous' surface that caused frequent accidents and hold ups, and roads were not good for the increasingly heavy goods traffic.

The other two routes running through Castlefield were by water. The Mersey & Irwell Navigation had operated from the 1720s. In 1761 a much more ambitious project opened, the Bridgewater Canal. This was the scheme of Francis Egerton, 3rd Duke of Bridgewater, devised with the help of his land agent John Gilbert and engineer James Brindley. The Bridgewater Canal was more ambitious, acknowledged as the 'first modern canal' as the first canal to be formed wholly independent of a river route. Earlier schemes had largely followed a natural waterway, either deepening and widening it and adding short diversions or cutting a separate channel along a river valley.



This map of the Manchester & Salford railways and canals demonstrates the extraordinary concentration of transport routes that converged in Castlefield. (Wikicommons)

While still fed by rivers, the Bridgewater Canal followed an entirely new route that included long stretches underground. The first stretch of the canal, between the Duke's coal mines at Worsley near Leigh and Stretford, opened in 1761, within a couple of years of its permission from Parliament. In 1765, the spur to its Manchester terminus was completed, to a large canal basin in Castlefield that was fed by the River Medlock through sluice gates.

Despite its tolls, the Bridgewater Canal halved the price of coal in Manchester overnight, an achievement that became still more economically significant as the adoption of steam power in cotton mills promoted Manchester to world leadership of the cotton industry. When the Canal was extended southeast to Runcorn on the Mersey Estuary in 1776, it provided a water route through to Liverpool, so enabling raw cotton and imports to be transported directly to Manchester by water. Numerous industrial premises developed along the river and canal banks in Castlefield, including several timber yards, a paper mill, a dyeworks and a vitriol (sulphuric acid) works. From 1805, further canal links created a continuous route between Hull and Liverpool and brought an even wider range of freight through Castlefield, boosting warehouse development, with a further link from Wigan added in 1821.

The Bridgewater scheme was an important precursor to the railways in many ways. It gave confidence that the business model of massive capital investment by shareholders could yield handsome profits, and provided its undertakers with experience in legal structure, surveying, earth-moving, building of tunnels and heavy goods transportation. Canals became almost immediately overshadowed by the railway network but provided many lessons for the railway companies to draw upon. The high tolls on these water routes made them hugely profitable for their investors but as the pace of technological development accelerated, were soon felt by the shippers of goods to be increasingly punishing. Canals were also painfully slow, the barges travelling at a horse's plod. The wondrous achievement

of the Bridgewater Canal Company was soon seen as a bottleneck, that was strangling the growth of the Pennine towns.

Meanwhile, pioneering engineers were alive to the potential of steam-powered locomotion, intent on finding a way to bring the stationary steam engine out from their role in water-logged mines and manufacturing premises, to make it self-propelling and so harness this new technology to overcome gravity, as currently accomplished by horse-drawn trams and winding engines. Hard-headed businessmen grasped the steam railway's potential to enhance trade and generate profit; the business model was already clear from the development of the canal system and promised unparalleled results in expanded trade.

Proposals for a Liverpool-Manchester railway were mooted as early as 1797 but only began to come together in 1821, when Joseph Sandars, a rich Liverpool corn merchant, and John Kennedy, owner of the largest spinning mill in Manchester, paid land speculator William James £300 for a detailed survey of a potential route. James, a surveyor who had made a fortune in property speculation, had seen what George Stephenson was doing in the development of locomotive technology at Killingworth colliery northeast of Newcastle, and was himself an outspoken advocate for a national rail network. After many a twist and falling out, on 20 May 1824 the Liverpool and Manchester Railway Company was formed by Henry Booth, who became its secretary and treasurer, with John Moss and Joseph Sandars as deputy chairmen. In October 1824, the first prospectus was issued for a railway linking Liverpool and Manchester. At this stage, a combination of steam, horse and fixed pulling machines was envisaged.

Meanwhile, in 1821 the Quaker and industrialist Edward Pease had got consent for a railway to cover the 25 miles (40 km) from collieries near Bishop Auckland to the River Tees at Stockton, passing through Darlington on the way. Pease too had planned to use horses to draw coal carts on metal rails, but after he met George Stephenson, then just a visionary colliery engineer, Pease agreed to

change the plans to include a steam locomotive for part of the hilly, difficult terrain. We must here pass over the astonishing feats of engineering and production that brought track and locomotive to fruition; the S&D opened on 27 September 1825, when Stephenson drove the steam engine *Locomotion*, hauling eighty tons of coal and flour, nine miles (14 km) in two hours, on one stretch reaching the incredible speed of 24 miles per hour (39 kmph). The first purpose-built passenger carriage, *Experiment*, was part of the train and carried dignitaries on this maiden journey, the first time a bespoke passenger traffic had been drawn by a steam locomotive. On the back of such an achievement, it is not surprising that Booth and Sandars were quick to appoint George Stephenson as the LMR's chief engineer. One of his first acts was to supervise a new survey, with Castlefield as the obvious Manchester terminus as an established transhipment point and, on the southwest edge of the city, the natural gateway to Liverpool. There was opposition from the Old Quay Company (as the Mersey & Irwell Navigation Company was now know), the Bridgewater Canal and two sisters, Eleanor Byrom and Ann Atherton, who had inherited the only undeveloped land in the area that the railway company needed to acquire. For many, the railway was a source of fear. Its opponents claimed passing steam locomotives would cause cows to stop grazing, hens to stop laying, poison birds by their fumes, and lead to the extinction of horses. Even surveying the line was fraught with danger: the surveyors were attacked with coal and stones and often had to work by moonlight for fear of hostility. The railway company even went so far to employ a prizefighter for their protection.

In addition, busy George Stephenson failed to supervise the survey adequately and when a Bill for consent to construct the railway was presented to Parliament in February 1825, it had to be quickly withdrawn as opponents drew attention to the obvious discrepancies in the levels. Stephenson was revealed under cross-examination by committee to have underestimated the cost of overcoming the considerable typographical challenges, his thick Northumberland accent adding to his difficulties in an uncomfortable cross-examination. The LMR Committee

replaced Stephenson with John and George Rennie, who in turn engaged a new Chief Surveyor, the highly experienced Charles Vignoles. The Committee now prepared for the introduction of a second Bill by enlisting new support and making calculated compromises in its plans to secure a smooth passage of the Bill. In a significant coup, it captured the support of the Marquess of Stafford, the main beneficiary of the Bridgewater Canal Trust. Instrumental in the Bill's passage was the reforming Tory MP for Liverpool and President of the Board of Trade, William Huskisson, who was a great supporter of the railway and a personal friend of the Marquess's. Lord Stafford's support not only wiped out opposition from the Bridgewater Canal Trustees, but also brought an investment in the scheme of £100,000, representing a shareholding of around 20%. The revised proposal also thwarted the anti-steam locomotive lobby by cleverly proposing a horse-drawn service. Finally, the route terminated not in Manchester, but on the Salford side of the Irwell at Hampson Street, close to the New Bailey Prison, thus avoiding direct conflict with the Old Quay Company. This second Bill was passed as the Liverpool and Manchester Railway Act in May 1826. Soon after, the Committee reappointed Stephenson as Engineer along with his assistant Joseph Locke. Stephenson soon fell out with Vignoles, who resigned as Surveyor.

Acquisition of land in Castlefield

Acquisition of land for railways was a time-consuming and often fractious process, involving lengthy negotiations with private landowners. Whereas the first railway prospectus in 1826 had the line terminating in Salford, the decision was soon made to cover the extra couple of miles to the existing confluence of trade in Castlefield. This meant finding land for a terminus at Liverpool Road. By the late 1820s, the only substantial vacant land in this busy area of Manchester was the south-west portion of the Byrom Estate bounded by Charles Street, Water Street and Liverpool Road. The Byroms were a well-established Mancunian family of entrepreneurs who had amassed their land holdings over generations. In the 1820s, two sisters, Eleanor Byrom and Ann Atherton, were the surviving heirs. Their father Edward Byrom had embraced the potential of improved river

navigation, but the sisters did not want the noise and dirt of the railway to spoil the residential potential of their land. Eleanor lived herself on nearby Quay Street, Ann in the original family home in Salford. There were just two small developments at the edges of this open plot: one of these was 41 Liverpool Road,[1] a house built in 1808 for John Rothwell, a partner in the Rothwell & Harrison dyeworks nearby on Water Street. After much negotiation, the sisters finally agreed to part with the land in February 1829, much to the railway directors' relief since the rest of the line was nearing completion by then.

John Rothwell's well-placed, simple but handsome house at the corner of Liverpool Road and Water Street became the dwelling of the first Station Agent, Joseph Green. 'Station Agent' was the original name for the role that became known as the stationmaster or superintendent; we have followed the original 1830s title in naming the house as a Landmark. (Joseph Green and other occupants of the house have their own separate chapter below). This house became the anchoring 'pin' around which all the rest of the terminus fanned out, with the track plotted to arrive on a platform directly behind the house at second storey level. The Crown Street terminus at the Liverpool end of the line was purpose-built at track level, a single large block similar to the Coach Offices at Liverpool Road (see below), but Crown Street Station was demolished to make way for a goods station. The Liverpool Road grouping of house and Coach Offices are a unique survival of the line's earliest days.

Laying the track

The two parallel train lines were laid using 15-foot (4.6 m) fish-belly rails at 35 lb/yd (17 kg/m), laid on stone blocks except at Chat Moss, where wooden sleepers were deployed. Wrought iron rail tracks were one of George Stephenson's many innovations (cast iron being too brittle for this use). The rails

[1] This remains Station Agent's House's official postal address; the numbering changed and reverted over the years

were laid to the gauge Stephenson had pioneered at Killingworth, of 4 ft 8 ½ inches. This was the gauge most widely adopted by other rail companies, despite competition from I. K. Brunel's broad gauge (7 feet) on the Great Western. (By the 1890s, after a period of mixed gauge operation, a Royal Commission decided in favour of the entire network running on Stephenson's standard 'narrow' gauge.) Stephenson also decided that the spacing of the two parallel tracks on the LMR should be the same as the track gauge itself, on the basis that it would be possible to operate trains with unusually wide loads up the middle two of the four rails during quiet times. Experience soon taught that this meant the tracks were too close, limiting the width of the trains, so the gap between tracks was widened on later lines. The narrowness of the gap also made maintenance of one track dangerous when trains were operating on the other.

The track's 31-mile route presented considerable engineering challenges, mapped out by the surveyors' careful work and overcome by the engineers. Most of the LMR line was very gently graded at no more than 1 in 880, with steeper gradients concentrated at Rainhill (1 in 96) and down through Wapping Tunnel to the docks at Liverpool (at 1 in 50). Even as the line's construction was underway, steam locomotion was by no means decided upon.

The LMR Committee was split between the use of constantly evolving steam engines that were unproven over steeper gradients, and cable-driven winding machines, which the Act anyway stipulated must be used for the passenger section of the Wapping Tunnel stretch between Crown Street and Edge Hill at the Liverpool end of the line. The LMR had played down the use of steam locomotives in their parliamentary bill to ensure its passage and there was still considerable public concern at the idea of monstrous machines rushing through the countryside belching noxious fumes.

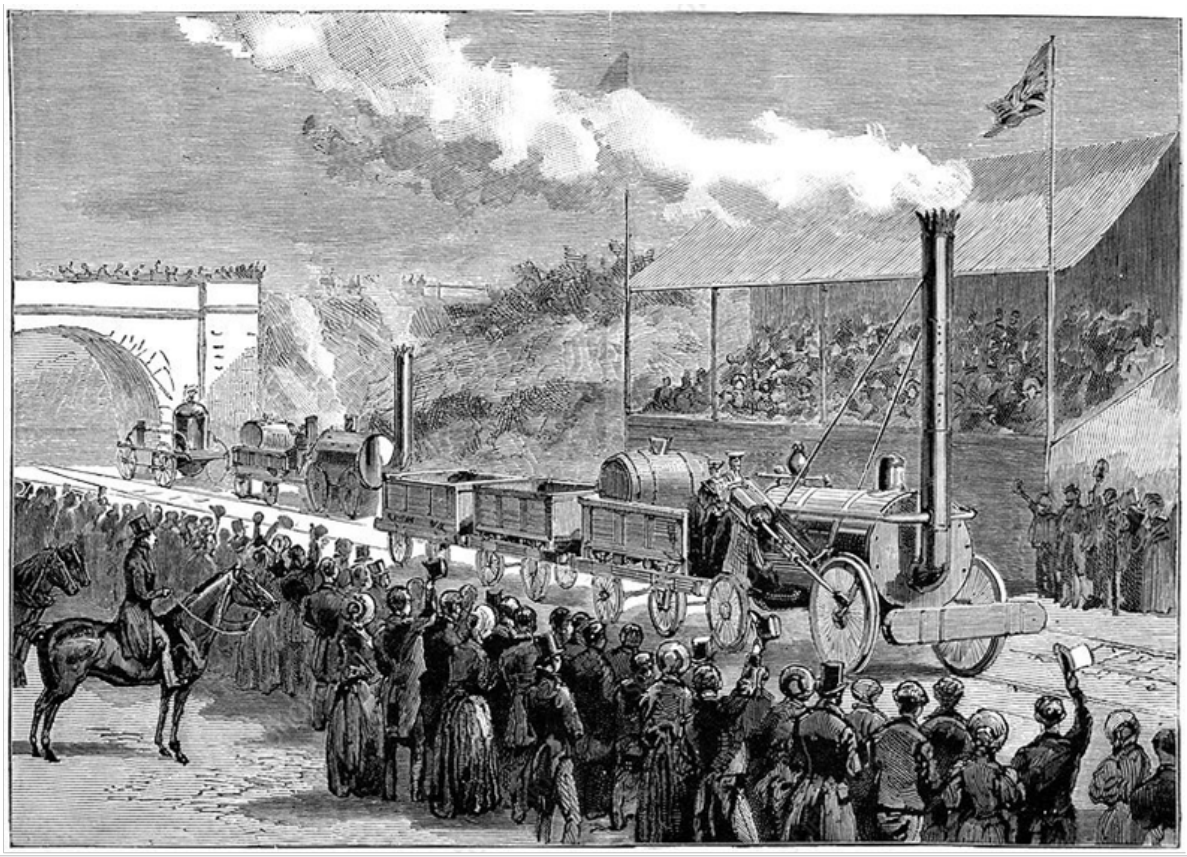
Stephenson was himself was not wholly opposed to cable haulage and continued to use it himself on lines where he felt it appropriate. The drawback was that any

breakdown anywhere would paralyse the whole line – and in any case, steam locomotives represented technological advance, and the future. In the end, the LMR directors decided upon a public competition to test competing steam engines, to take place on a 1¾ mile stretch of completed track at Rainhill, nine miles east of Liverpool. The competition was known as the Rainhill Trials and generated huge public interest across Britain and even North America, all serving to stimulate interest in the railways.

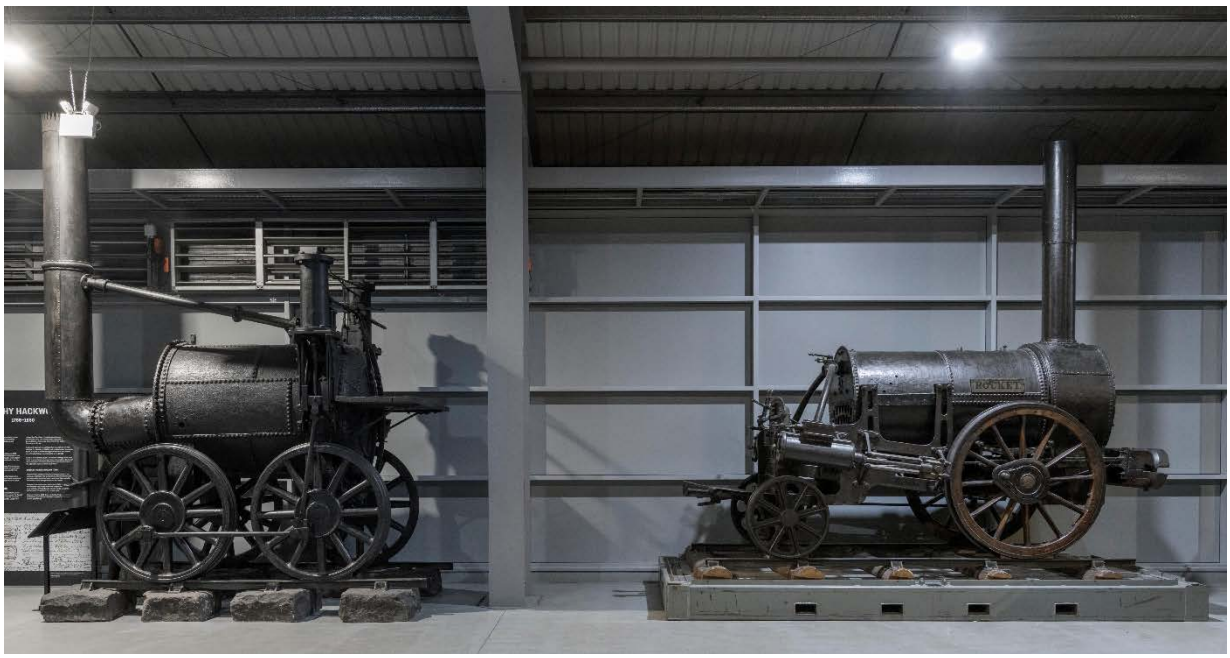
The Rainhill Trials

There was a long list of rules for eligibility to enter the competition: in essence, the engine could weigh no more than four and a half tons; had to have a pressure gauge; the maximum boiler pressure was to be no more 50 lbs per square inch, and the engine could not cost more than £550 to produce. Each engine was required to pull three times its own weight over a distance of 35 miles, made up of twenty 1¾ mile shuttles back and forth. The average speed was to be no less than 10 mph, and 30 miles were to be travelled 'at full speed.' The engine had to be able to carry its own fuel and water to complete the full 35 miles and then to refuel and complete the distance a second time, as a trial of mechanical reliability. Coke not coal was to be used so as 'to consume their own smoke.' Standard wooden tenders were supplied for each engine to carry fuel and water. As incentive, a prize of £500 was offered for the winning engine (some £50,000 in today's terms).

The competition was widely advertised and attracted many proposals. The trials were held from 6th to 14th October 1829 and 10-15,000 people were said to have turned out to watch the demonstrations on the first day. Ten locomotives had made it through to the starting blocks but on the day of the first trial, only four were fit to run.



The Rainhill Trials, with Stephenson's *Rocket*. Standard tenders were provided to all engines, which had to complete 20 continuous 1 ¾ mile shuttles along the completed stretch of track, to cover 35 miles in total. Only the *Rocket* achieved this.



The *Sans Pareil* and *Rocket* at Locomotion in Shildon in County Durham

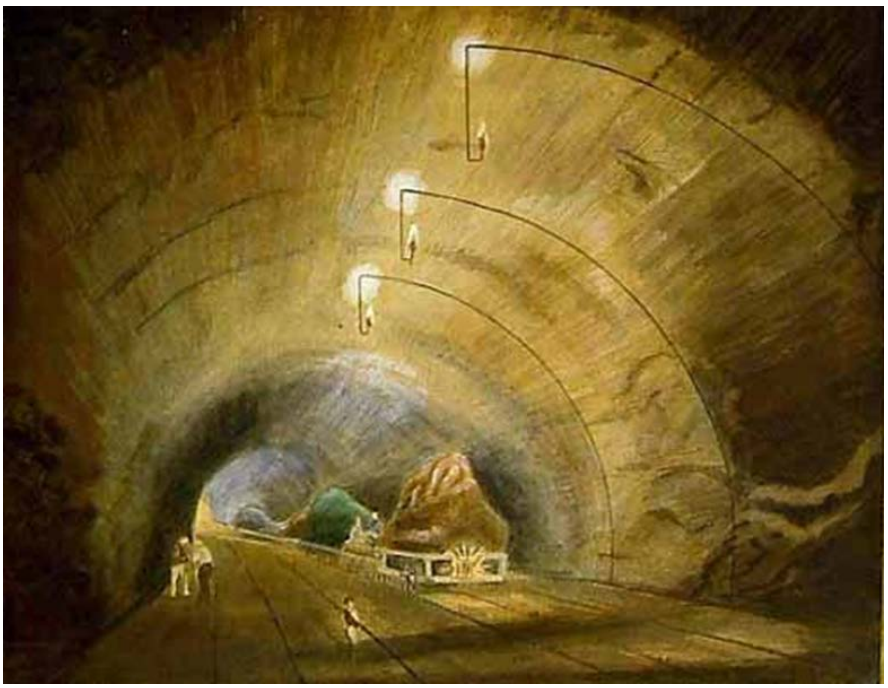
Among them was the *Rocket,* built and designed by George Stephenson and his equally brilliant son Robert, then twenty-five years old. The pair had worked hard to improve the notoriously unreliable engines on the S&D, for which Robert and Henry Booth constructed the *Rocket* in Newcastle, while George worked on the LMR track construction. The *Rocket* now had multi-tube cylinders which meant more efficient heat transfer, saving as much as 35% in weight because less water was needed in the boiler. The Stephensons were so focussed on speed that the engine had no brakes; it had to be put in reverse to stop. The other three contenders soon fell by the wayside, thwarted by mechanical failure from completing the task set. The *Rocket*, driven by George Stephenson himself, performed faultlessly, proving its reliability by achieving a maximum speed of 24 mph and an average of 14 mph over the distance, and emerged as outright winner. The LMR had its locomotive, and later offered demonstration runs for inquisitive passengers as part of a PR blitz to reassure the wider public's concerns.

Construction of the line

Any account of the LMR must celebrate the challenges of terrain that had to be overcome to get the line from Liverpool to Manchester. That all were constructed against all odds in the 2½ years between parliamentary permission in June 1826 and the test runs of the railway in Spring 1830 makes these feats all the more impressive. George Stephenson was the presiding genius but it was by no means his design achievement alone.

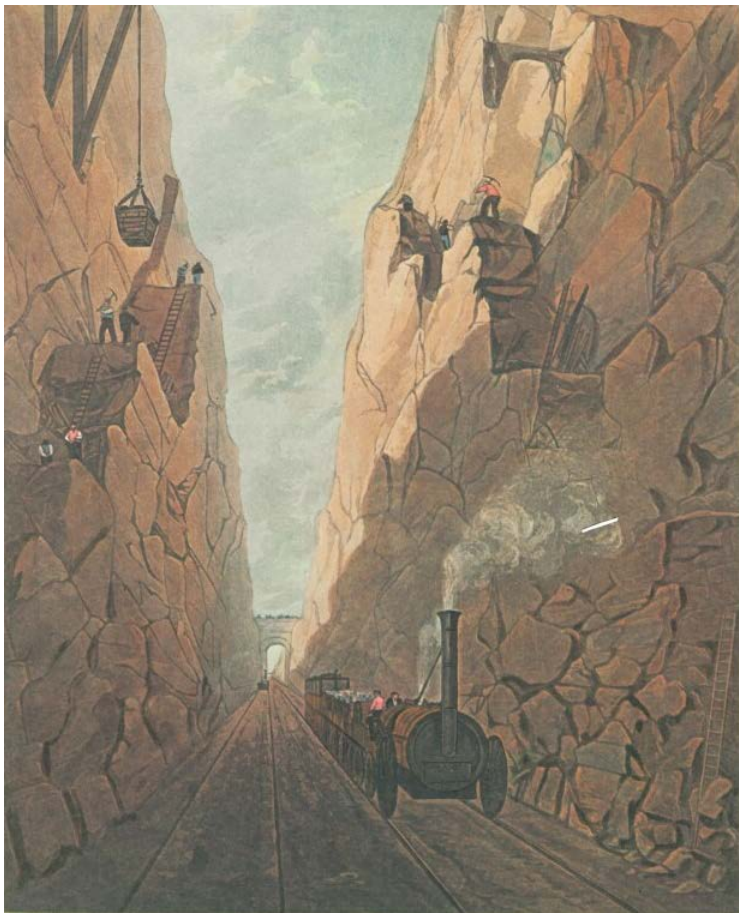
There was many a falling-out, and many other engineers brought their own inspiration to individual elements. Navvies (short for navigators) who had worked on the canal did the hard labour on the LMR's construction, mostly using hand tools. The most productive teams shifted up to 20,000 tonnes of earth a day and were well paid, but the work was dangerous and several deaths were recorded.

Edge Hill Station in Liverpool, where the freight line (centre) emerged from the Wapping Docks to join the passenger line from the Crown Street terminus (right-hand tunnel). The double track in the centre led down to Wapping through 2 km of tunnel under the city. In both cases, the engines had to be winched up to Edge Hill by cables driven by steam-powered winding machines, beneath the two chimneys shown here.
Below: the interior of Wapping Tunnel.



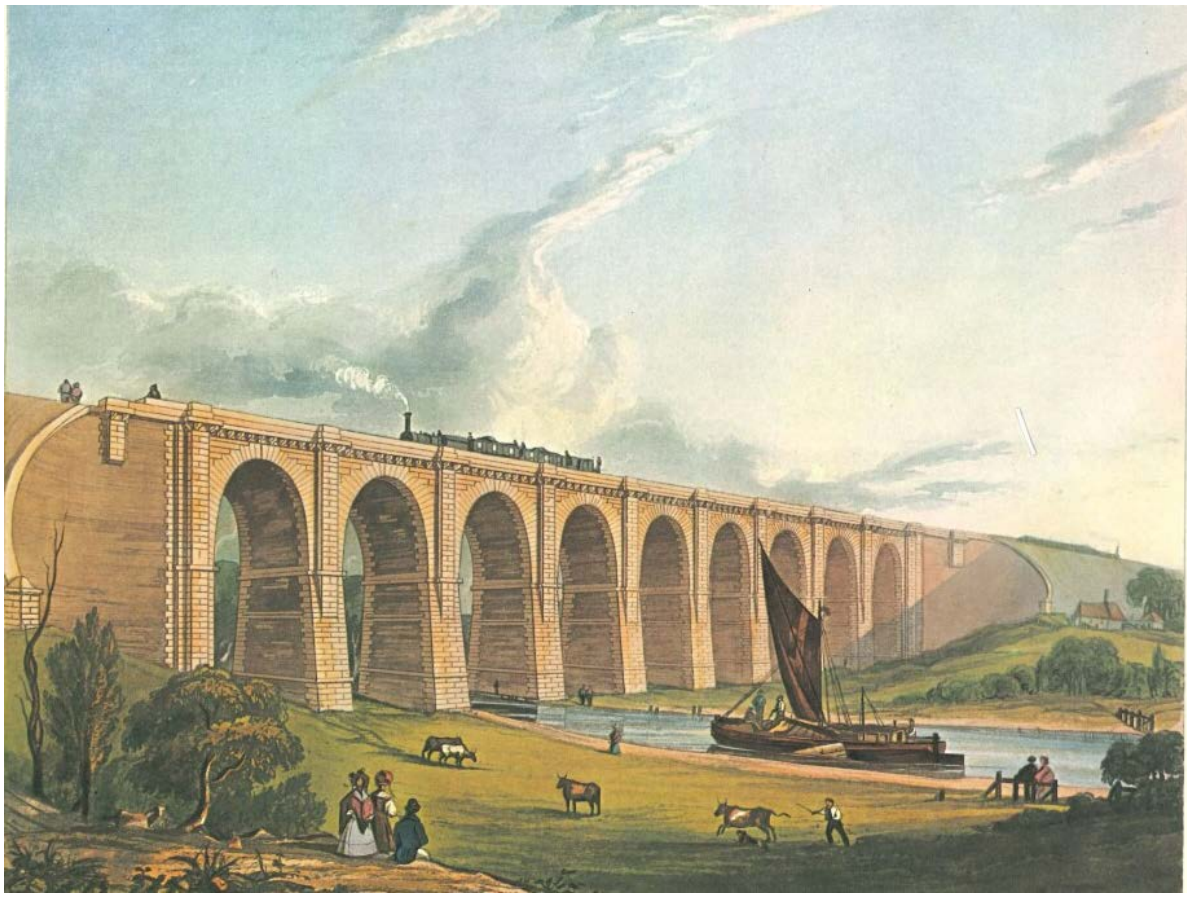
A total of sixty-four bridges and viaducts were built along the line, in brick or stone. The exception was the Water Street bridge at Liverpool Road Station, where a cast iron beam girder bridge was built (see below).

Stephenson had originally recommended a more northerly route out along the docksides to avoid some of the geographical challenges, but resistance from the dockyards and aristocratic landowners meant that route had to be abandoned. The more southerly line the railway company eventually adopted was 31 miles long. Even as the double-track goods line headed east from the docks at Wapping, an upward-sloping tunnel was needed. Wapping Tunnel was constructed 1826-9 and designed by George Stephenson. Whitewashed inside and lit by gaslights, it was 2,030 metres long and the first transport tunnel in the world to pass under a city. It was rightly considered a wonder of its day and public tours were organised. The tunnel's 1:48 gradient was initially too much for the locomotives, so a large stationary steam winding machine was used to bring waggons up from the docks; in the opposite direction, they were let down by gravity under the control of the Tunnel Brakesmen. The same dual propulsion system was used for the single track passenger line that came up from the Crown Street Station. Both lines then had to be managed down an incline to emerge into the Cavendish Cutting (itself 262 metres long) at Edge Hill, where the goods and passenger spurs merged and carriages were hitched behind the steam locomotives for the rest of the journey. The two steam winding houses and their chimneys for the Wapping and Crown Street tunnels were housed in John Foster's so-called Moorish Arch which provided a grand entrance to the locomotive line.



Top: The two-mile long, 40 feet high cutting at Olive Mount, still under construction in 1830.

Below: the viaduct across Sankey Valley, crossing both river and canal.



Four miles on, an outcrop at Olive Mount required a 2 mile (3 kilometre) cutting through solid rock up to eighty feet (24 metres) high, again supervised by Stephenson. At Rainhill, a road bridge had to be built to carry the turnpike road over the railway, set at a 34° angle in a complicated piece of setting out.

At Sankey Valley, there were both a brook and canal to negotiate. Stephenson's solution was another marvel: a nine-arch viaduct with arches high enough to allow clearance for the masts and sails of the Mersey barges that plied the canal beneath. The piers of the bridge were set onto sandstone blocks from the Olive Mount excavations; each arch spans 50 feet (15 m) and is around 60 feet (18 m) high. It is still in use today.

The biggest challenge of all was yet to come: crossing Chat Moss, a bleak stretch of deep bog almost five miles across, which contemporaries said was impassable. The proposal to do so was seized upon by opponents to the railway as proof of the overall project's unfeasibility, especially as Stephenson originally said he would 'float' the line across the marsh. After his reappointment as chief engineer, Stephenson and his assistant engineers John Dixon and Joseph Locke set 200 men to work to cut four parallel drains the full length of the moss crossing, aiming to drain a 48 feet width between them and allow it to harden as a conventional embankment. However no matter how much infill was tipped in, it was absorbed by the bog without any visible effect. At Blackpool Hole, a contractor tipped soil into the bog for three months without finding the bottom. The modest amount set aside for the job by the LMR board disappeared equally fast. Chat Moss was referred to at that time as the 'Valley of Desolation' that, in the words of the engineer, 'engulfed and swallowed everything; ballast, casks, and hurdles sank into the shades of eternal night.'

The crossing of Chat Moss, a treacherous marsh, was one of the engineers' biggest challenges.

With time before the opening ticking by, in 1829 Stephenson persuaded the railway directors that he should revert to his original plan to float the line across. Dried moss and brushwood hurdles were piled into the partially drained area until a sufficiently firm base for a roadbed was created. More faggots of heather and brushwood were added, then covered with earth, sand and gravel and finally a thick coating of cinders, onto which the oak sleepers and track was laid, placing them on timber in a herring bone layout. The line was supported by empty tar barrels sealed with clay and laid end to end across the drainage ditches on either side of the railway. This apparently homespun approach worked and the crossing of Chat Moss was completed by the end of 1829. On 28 December, a test run by the *Rocket* carrying 40 passengers crossed Chat Moss in 17 minutes, averaging 17 miles per hour (27 km/h). In April, a train carrying a 45-ton load crossed at 15 miles per hour (24 km/h) without incident. The crossing is still operational today, carrying engines twenty-five times the weight of the *Rocket.*

Stephenson's Viaduct & the Water Street Bridge

As the track approached the end of its journey at Liverpool Road, Stephenson designed a rail viaduct over the River Irwell feeding onto a cast iron road bridge to carry the line over Water Street. This use of cast iron girders in this flat-headed bridge was another innovation by Stephenson, demonstrating their potential as structural elements for the wider rail network.

Under his direction, Stephenson's design was made by William Fairbairn and James Lillie, at their factory in Ancoats. This was the only iron bridge on the line, a flat bridge being necessary to protect the headroom of the narrow road below. Fairbairn took care to test the girders before their installation even for this relatively narrow span, but as girder tolerances were stretched ever further in the years to come, there would be many examples of catastrophic failure culminating in the disasters at the Dee bridge in 1847 and at Tay Bridge in 1879.

The bridge brought the line in at an elevated height: as today, a short metal footbridge led out from the second floor of the Station Agent's House directly onto the eventual departures platform onto which the viaduct gives. (Arriving passengers dismounted on the other side of Water Street bridge, negotiating a ramp down to street level.) There was aspiration to classical elegance in the design of the bridge, which had moulded pilasters and panels on its ironwork walls. The trackbed was supported by colonnades of cast iron Doric columns running along the Water Street pavements on both sides beneath. 'This', wrote an enthusiastic contemporary, 'gave the interior the appearance of an elegant classical temple.'

A pre-1904 postcard of Goerge Stephenson's innovative cast iron bridge over Water Street, supported on cast iron Doric columns, which, wrote a contemporary, 'gave the interior the appearance of an elegant classical temple'.

While Stephenson's viaduct over the Irwell survives, the cast iron bridge became unsafe and was replaced in 1905 by the present flat steel girder bridge, and removal of the colonnades beneath doubled the useable road width. Proposals to re-erect some of the Doric columns in a park came to nothing, but the campaigning around these changes saw the first public expressions of awareness of the historic significance of the Liverpool Road station and its buildings.

The Passenger Building & 1830s Warehouse

In June 1830, construction began on the two-storey neoclassical Coach Offices abutting the Station Agent's House. Its exterior drew from stagecoach and canal company offices, but it soon became known as the Passenger Building, another of those early shifts in railway vocabulary. The architect may have been John Foster of Foster & Stewart of Liverpool. A reliable designer of civic buildings, Foster is also thought responsible for the Liverpool terminus at Crown Street, but the railway company used various architects so neither attribution is certain. At street level, the Passenger Building consisted of two booking halls, one for first-class passengers, the other for second-class. Two staircases (a very grand one for the first-class passengers with ornate plasterwork) led up to two corresponding waiting rooms at track level. Passengers then had to climb up the carriage steps to their seats.

In 1833, A Tourist, the anonymous author of *The Railway Companion*, described ascending the staircase at Liverpool Road Station, moving from the booking office to track level and entering railway space:

> 'There is something singularly striking… in this sudden change in our altitude – this alteration in our relative position with our fellowmen. But a moment ago we were in the midst, and made a little part of a busy multitude, each of whose features betokened an eager pursuit of some object: anon we find ourselves… translated to another equally sublunary scene from which we discern the self-same beings of our previous companionship still plying the self-same stern activity, but in a world that now lies stretched far beneath us.'

The extract captures the heightened impressions of a new experience, the sensation of being removed from the crowded street into a loftier railway space by this new architecture, the station a transformative place.

The large warehouse on the other side of the goods line was also built in 1830. In those early days, not realising how the demand for increased capacity for both passengers and goods would mean tracks would multiple, these facilities no doubt seemed impressively ample provision.

Both buildings are, by definition, exceptionally early examples of railway infrastructure. Though starting from familiar forms and structures, the architects had to make assumptions about what would be needed. There was no precedent for a dedicated booking office; bookings for the Stockton and Darlington Railway were made at inns. A ticket office constructed in Stockton in1830 looked more like a canal toll house than anything to do with a railway. At Liverpool Road, the LMR showed more imagination, providing an imposing point of arrival and departure that firmly segregated their still-imagined passengers. Canal and coach traffic divided their travellers between 'inside' and 'outside' passengers, but the Liverpool Road Passenger Building is the earliest formalisation of areas designed for 'first' and 'second' class passengers depending on what they had paid for their ticket, and a building designed to entice its clientele.

The 1830 warehouse was less distinctive in design, being squarely based on canal warehouse design and constructed in less than six months. A site of storage and transition, its scale is still impressive. The external appearance of the Station Agent's House and this immediate setting has therefore remained remarkably unchanged in the past 200 years. Such was the success of the railway that two more warehouses were built the following year, Cotton Warehouses 1 and 2, connected by bridges and rails to the 1830 Warehouse.

With all the infrastructure now in place and all test runs completed, by summer 1830 the directors felt confident of planning a grand opening of the line for 15th September. Popular actress Fanny Kemble, a 21-year old, recent Covent Garden sensation performing in Liverpool at the time, was given a test run on the *Rocket* from Edge Hill as far as the first viaduct. Her letter to a friend gives a sense of the strangeness of the technology at the time:

> *'[The engine] goes upon two wheels, which are her feet, and are moved by bright steel legs called pistons; these are propelled by steam, and in proportion as more steam is applied to the upper extremities (the hip-joints, I suppose) of these pistons, the faster they move the wheels... The reins, bit, and bridle of this wonderful beast is a small steel handle, which applies or withdraws the steam from its legs or pistons, so that a child might manage it.*
>
> *'The coals, which are its oats, were under the bench, and there was a small glass tube affixed to the boiler, with water in it, which indicates by its fullness or emptiness when the creature wants water... This snorting little animal, which I felt rather inclined to pat, was then harnessed to our carriage, and, Mr. Stephenson having taken me on the bench of the engine with him, we started at about ten miles an hour.'*

Fanny also developed an instant crush on George Stephenson,

> *'the master of all these marvels, with whom I am most horribly in love. He is a man of from fifty to fifty-five years of age; his face is fine, though careworn, and bears an expression of deep thoughtfulness; his mode of explaining his ideas is peculiar and very original, striking, and forcible; and although his accent indicates strongly his north-country birth, his language has not the slightest touch of vulgarity or coarseness. He has certainly turned my head.'*

The stage was now set for the grand opening.

The Opening of the Liverpool Manchester Railway

A prestigious guest list of 700 people was invited. The guest of honour was the Duke of Wellington, still fêted by many as the hero of Waterloo but by September 1830, an increasingly unpopular and intransigent Prime Minister, holding firm against the clamour to widen the male vote. In Manchester especially, memories were still fresh of the massacre at St Peter's Fields in 1819, when the cavalry charged a crowd demonstrating for manhood suffrage, killing eighteen and

injuring several hundred. The event, which took place only half a mile from Liverpool Road, has gone down in history as Peterloo, and only enhanced Castlefield's reputation for working class radicalism. For all these reasons, Wellington was uneasy about his destination even before he set out.

Other politicians, worthies and celebrities also turned out in number at Crown Street Station, each holding a ticket with their allocated train and seat written in by hand. The 4-carriage passenger train carrying the Duke had the southerly track to itself, pulled by the *Northumbrian.* Seven more trains were pulled along the northerly track, following the Ducal train in an orderly cavalcade. It was nevertheless a lot of locomotion and noisy commotion, augmented by cheering crowds along some stretches of track (others, from the illustrations of the opening, took little interest, already used to seeing the puffing engines passing by).

Wellington had a magnificent carriage 8 feet wide and 32 feet long, covered in a crimson canopy with gilt pillars and a vast crimson ottoman running down the middle. Curtains for the full carriage length were thoughtfully provided in case the weather took a turn for the worse. The order behind the engine was a wagon for a brass band; a passenger wagon of dignitaries, including Liverpool MP William Huskisson and his wife Emily; the Duke's car, and finally another carriage of guests. All went well for the first half of the line apart from when a carriage in one of the lesser trains jumped its track causing a minor collision, but all was easily righted. Champagne was poured and passengers enjoyed the passing scenery and marvelled at the power of the locomotives, although the noise of the engines and tracks and the playing of the brass band made communication difficult in the open carriages.

Fifty-five minutes into the journey, the Ducal train stopped at Parkside for the engine to take on water. This was the only planned stop of the journey and the leaflet giving the schedule for the day instructed that travellers were 'requested

not to leave the train'. Despite this, some fifty men – but no women – got down from their carriages to stretch their legs and chat. They included prominent members of the government, among them 50-year-old William Huskisson, the popular MP for Liverpool and President of the Board of Trade. Huskisson's health had been indifferent for most of his life – he was lame in one leg and his doctor advised him not to attend the day due to a urinary infection. But Huskisson, as a leading advocate for the railway and the benefits it would bring to trade, was determined not to miss it. He was an able financier and a rare advocate among the Tories for a relaxation of the unpopular Corn Laws, which imposed a tax on imported corn that severely impacted the working class in times of bad harvests. His campaign for wider relaxation in taxation and the end to monopolies that restrained commerce and industry also made him popular with the entrepreneurs of the northwest. However, such views put him at odds with Wellington, who had dismissed him from his cabinet. The pair had barely spoken for two years.

As the worthy gentlemen milled about on the track, the band still playing, the engine hissing and the hubbub of excited passengers and onlookers, Treasury MP William Holmes suggested to Huskisson that he might turn the day to political advantage by trying to mend bridges with Wellington, who seemed, for once, to be in a jovial mood as he basked in the reflected glory of the Railway's accomplishment. Huskisson was on his home ground and his popularity with the northwest's mercantile community could be useful to the beleaguered Prime Minister, so now was a good moment to choose. After some hesitation, he approached the carriage between the parallel tracks, where the Duke was sitting in the front corner and stretched up his hand. Wellington reached down to shake it and some friendly words were exchanged.

Just at that moment, shouts went up, 'An engine is approaching. Take care, gentlemen!' The *Phoenix* and the *North Star* had already passed the stationary ducal train as it came to a stop; after an interval, now it was the *Rocket* that was approaching down the parallel northerly track. There was still plenty of time to avoid it and the men either scrambled up the embankment or back into their

carriages, most of which had permanent steps. Not, however, the ducal car, for which a removeable flight of steps was considered more appropriate, to help the ladies descend where they would. Prince Esterhazy was hauled up into the car unceremoniously by his hands and jacket but Huskisson and Holmes dithered between the tracks in the noisy confusion.

Driving the *Rocket*, assistant engineer Joseph Locke finally made out what was happening ahead as the track cleared of men, but with no brakes, all he could do was throw the engine into reverse, as Holmes and Huskisson clung to the side of Wellington's fancy carriage, whose extra width meant it overhung halfway across the central gap. In trials, it had taken the *Rocket* one hundred yards to come to a halt from 24 mph, which had been considered acceptable. Had Holmes and Huskisson remained still, the remaining two feet of clearance would – just - have been enough, and Holmes urged Huskisson to hold still as he was. But Huskissson swung his good leg over into the carriage as other passengers tried in vain to pull him aboard. In panic Huskisson grabbed a carriage door – which swung open under his weight, suspending him directly in front of the approaching engine.

Huskisson fell into the path of the *Rocket*, and its wheel passed glancingly over his calf and, more seriously, crushed his thigh. A tourniquet was applied, as Mrs Huskisson looked on in horror from the Duke's carriage. Huskisson himself knew immediately that he had met his end, but on the advice of three eminent doctors among the passengers, he was carefully placed on a door ripped from a nearby railway store. George Stephenson insisted that, rather than returning to Liverpool, he himself would take the injured man on towards Manchester with the *Northumbrian.* The doctors among the passengers advised instead stopping at the first house they came to, a vicarage at Eccles, four miles from Liverpool Road Station. The band hastily vacated their waggon, and the other carriages were uncoupled. The doctors attended the patient and his wife, as the engine achieved a full 35 mph, the fastest yet. Unaware of the accident, the onlooking crowds cheered as the racing train chuffed past.

A thunderstorm hit, and then hail as the doctors carried Huskisson off at Eccles Bridge, still strapped to his door, over a deep and slippery cutting and across several hundred yards to the vicarage, where they were ushered in by the startled vicar's wife, Mrs Blackburne (her Reverend husband was among the passengers of one of the lesser trains and unaware until he reached Liverpool Road that his vicarage had been chosen to receive the patient, upon which he rushed home by horse carriage). Amputation was the only option for Huskisson, and a message was sent to Manchester asking for the necessary surgical implements. The surgeons duly arrived, the doctors doing what they could to keep Huskisson comfortable, but he was in no state for an operation. Around 3pm he was conscious enough to hear the sound of distant cannon fire announcing Wellington's arrival in Manchester, but at nine that evening, he died, the speech he had written in anticipation of the celebratory dinner back in Liverpool that evening still in his pocket.

Meanwhile, the accident had cast an inevitable pall over the rest of the day. Once the *Northumbrian* had departed, lively debate ensued at Parkside. Wellington insisted that it would be disrespectful to do anything other than return to Liverpool, on the grounds that the tragedy had ruined the day. The railway directors argued for the importance of proving the success of their grand scheme despite this PR disaster, which had been due to human error and no fault of the engineering or technology. Besides, a huge crowd was gathered in Manchester to welcome the train. The decision was finally swayed by the arrival on horseback of officials from Manchester and Salford, who reported that the mood of the waiting crowd was turning ugly at the delay and they feared a riot if the trains and Wellington failed to appear. At this challenge to civil order and his own courage, Wellington gave in. His fine carriage was attached to the *Phoenix* on the other line, which was in turn attached to the *North Star* and the straining convoy limped eastwards. Six miles from Manchester, they were met by Stephenson, returning with the *Northumbrian*. This was recoupled to the Duke's carriage and they set off again at full speed to cover the remaining stretch.

As the train pulled in onto the arrival platform across the road from the Station Agent's House, the crowd's reaction was mixed. Some cheered but many others hissed and threw vegetables. Two *tricoleur* flags were raised, evoking the radical politics of the French Revolution, and banners were raised saying' Vote by Ballot' and 'No Corn Laws' as Castlefield's independently minded weavers and workers made their views known. A buffet was laid out on the top floor of the warehouse and most of the passengers got out to replenish their strength after the long and trying morning. Wellington, however, feared an assault and stayed in his carriage, curtains drawn with other principal passengers, and asked that the engines be made ready for a speedy return to Liverpool. They set off back to Liverpool around 4pm.

The Duke's train at least had an uneventful return, although Wellington himself got out at Roby for fear of a further scene in Liverpool, to stay with the Marquis of Salisbury nearby. The rest of the carriages faced further delays due to a woeful combination of misplaced engines, technological hitches and a lack of turning spaces. Eventually, just three of the eight participating engines pulled all the remaining carriages in one long line, many lashed together with rope. They crept along at a mere 5 mph, no faster than a brisk walking pace. The excited crowds had walked over the rails in many places, encrusting them with gravel and mud. When darkness fell at 7pm, the convoy was still only halfway. Those who could took the option of a carriage ride to nearby friends instead, and the train was pelted with missiles. Beyond Parkside, they encountered the disgruntled bandsmen, left stranded and trudging their way back along the track in the moonlight, instruments in hand. The convoy finally arrived in Liverpool at 10pm, an anticlimactic arrival. Grand dinners had been planned and news of Huskisson's accident had travelled only slowly, let alone his final demise, but the train's late return meant few had any appetite for celebration in that moment.

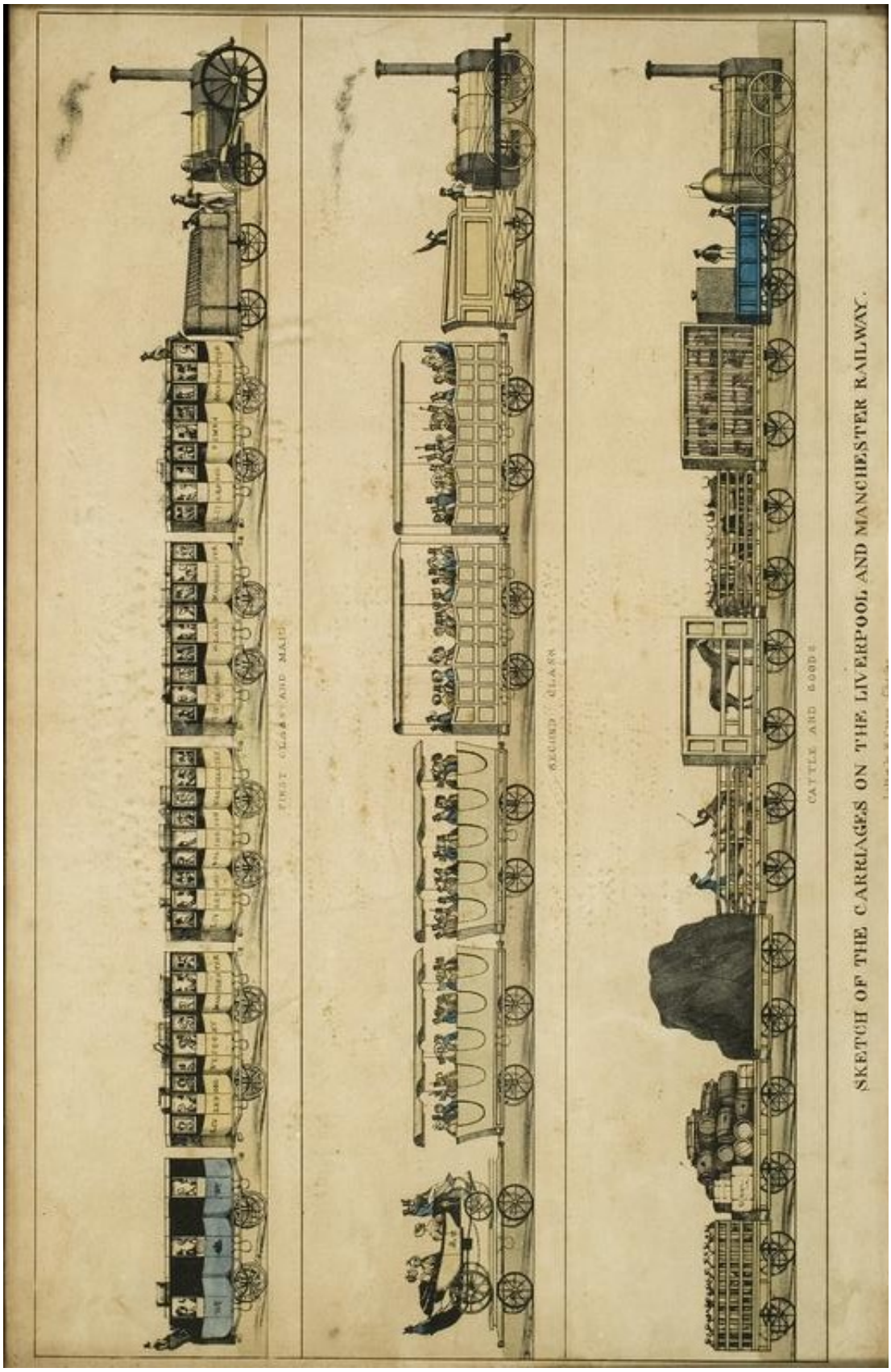
For us today, used to much faster speeds, the tragic accident seems a strange event, hard to imagine that an engine approaching at some 25 mph could have caused such terrible confusion. It certainly added to the drama of the day, whose

momentousness was undimmed. With the line itself now proven, nothing could stop the railways rapidly becoming a part of daily life, with a speed of infrastructure and technological delivery that seems all the more impressive as we continue to wrestle with the same issues today.

The LMR in operation

Within days of opening, the LMR was running a regular service carrying 130 passengers in each direction, with journey times between Liverpool and Manchester reduced to two hours. Within months, most stagecoach companies operating between the two towns had closed their routes, finding it impossible to compete. After making their way down to street level, arriving passengers then had to make their own arrangements to be collected or rely on private or hackney carriages and horse omnibus operators, for which tenders were invited in November 1830. Horses remained essential for the smooth running of the railway and new stables were constructed on Water Street partially below the arrival station with stalls for sixty-one horses. Three were used for tracking at the station, four or five for parcel vans, one a collector's horse, and the rest to transport goods into Manchester. Very wealthy patrons of the LMR might even take their own carriages from station to station. These were mounted on bogies and transported by train at a charge of 20s (around £60 in today's terms) for a four wheeled carriage and 15s for a two wheeled carriage.

The LMR also had a passenger booking office at Market Street (Manchester's main thoroughfare) alongside the omnibus service to transport passengers to Liverpool Road. In 1837, Joseph Green suggested that that the Market Street offices should not be used to book passengers as it was 'inconvenient and prejudicial to the Company' owing to the unreliability of omnibus service. The LMR Directors agreed with Green, ruling that the Market Street offices should only be used for parcels.



Bury' s depiction of the variety of waggons and carriages that ran on the LMR.
Science Museum Group Collection

Within a few weeks of opening, the line carried the world's first railway mail carriages. From December 1830, when more powerful engines were delivered, freight traffic became an immediate success despite a price war with the canals. Livestock were brought to ground level down the long ramp constructed from the track level across the road from the Station Agent's House. The railway was a financial success, paying investors an average annual dividend of 9.5% over the 15 years of its independent existence, making it the most profitable of any British railway company. Its finance was deliberately designed for wide ownership and benefit from the profits: shares were limited to ten per person.

So much had to be worked out from scratch. A system of signalling was needed, and this was undertaken on the LMR by policemen, who were stationed along the line throughout operating hours at distances of a mile or less. They signalled that the line was clear by standing straight with their arms outstretched. If no policeman was not present, or was standing at ease, an obstruction on the line ahead was to be understood. Soon, a system of hand-held flags was developed, with a red flag to stop a train, green indicating that a train should proceed at caution, and various other colours for specific circumstances. Any flag waved violently, or at night a lamp waved up and down, indicated that a train should stop. Until 1844 handbells were used as emergency signals in foggy weather, though in that year small explosive boxes placed on the line began to be used instead. As a safety measure, trains were controlled on a time interval basis: policemen signalled for a train to stop if less than ten minutes had elapsed since a previous train had passed; if more than seventeen minutes had passed, the 'all clear' signal was given. If a train broke down on the line, the policeman had to run a mile down the track to stop oncoming traffic. In 1837 the London and Birmingham Railway conducted trials using a telegraph to direct signalling and in 1841 a uniform national system of coloured signals was adopted, but despite these advances elsewhere, policemen continued to control the LMR until its merger with the Grand Junction Railway in 1845 (see below).

The railway infrastructure at Liverpool Road Station developed from the moment of its opening. By 1831, Liverpool architect and surveyor Thomas Haigh was commissioned to extend the goods accommodation and designed two warehouses which came to be known as Cotton Warehouse 1 and Cotton Warehouse 2, reflecting the station's importance as entrepot for this essential raw material. The warehouses were interconnected by bridges and rails and linked to the 1830 Warehouse, to enable the movement of goods on trucks across the expanded station, and adapting haulage techniques learned from earlier tramways.

Between 1836 and 1837, the station was enlarged to improve facilities for passengers arriving from Liverpool. Outbound passengers used the Station Building and its platform, while travellers inbound from Liverpool left their trains on the Irwell Bridge and negotiated a sloping path down to Water Street. At the other end of the line, the railway directors had realised almost immediately that Crown Street was too far away from the centre of Liverpool to be practical, and had decided by 1831 to construct a new passenger terminus at Lime Street, linked to Edge Hill station by a tunnel, which opened in 1836. The need for 'commodious' accommodation for passengers arriving at Liverpool Road was equally clear. No details of the original arrival facilities at Liverpool Road survive, but contemporary terminal buildings were typically plain wooden structures with just a small roof for shelter. By 1841, Whishaw described a 156-feet arrivals canopy at Liverpool Road, supported by cast iron columns and fronting an open arrivals shed, which at least offered some shelter. Passengers arrived facing the elegant water tower built in 1830 to supply water for the locomotives and to house the pumping engine needed to keep it replenished.

In 1837, the LMR went into partnership with the much larger Grand Junction Railway (GJR) which opened the first railway from Birmingham to Warrington in 1837, another project by Stephenson and Locke. The GJR line was 82 miles long (132km), illustrating how fast the web of railway lines was spreading across the

country. This partnership now shaped how Liverpool Road Station operated. In July 1837, the GJR line connected with the LMR at Newton Junction, some 20 miles to the west of Manchester. GJR used Liverpool Road as their Manchester terminus, with GJR employees working alongside the LMR staff. The Manchester Guardian reported that the first-class booking office at Liverpool Road 'is now appropriated solely to the use of the Grand Junction Company… the only booking office for passengers and parcels by all their trains.' This suggests that by 1837, the LMR no longer used the separate booking offices for first and second class passengers.

Railway timetables set the times of day that passengers travelled and when the station was busiest. The Grand Junction Railway, which ran trains from Birmingham to join the LMR, began services from Manchester at 6.30am and ceased at 6.30pm, while trains arrived from Birmingham as late as 11.30pm. Another table of departures from Liverpool Road for trains on LMR for 1841 shows the earliest train pulled second class carriages, destined for Liverpool at 7.30am (or 7am on Sundays) with the latest, 'mixed' trains leaving at 7.15pm. For the most part, only passengers leaving Manchester were in the area during the daytime and early evening. The bye-laws for Hackney Coaches allowed them to wait outside the railway office on Liverpool Road 'when not actually hired, [they] shall stand, from nine o'clock in the morning until twelve o'clock at night.

In 1841, the Manchester & Leeds Railway (MLR) opened. Its original Manchester terminus was located on Oldham Road. Like Liverpool Road, this location was soon too far from the town centre to be considered convenient, as passengers' expectations increased. The developing railways had also rapidly moved beyond the improvised single platform station model trialled at Liverpool Road. The MLR therefore decided to extend its line to terminate at Hunt's Bank, only a mile or so away from Liverpool Road Station, and they encouraged the LMR to join them in this new terminus. A new stretch of track was built roughly parallel with the Irwell, running from Ordsall Lane to Hunt's Bank. Hunt's Bank (now Manchester

Victoria) opened to LMR trains on 4 May 1844 and from now on, no more passengers got out at 'the world's first passenger station', which became a station solely for goods. In August 1845, the LMR was absorbed by the GJR, which in 1846 merged in turn with the London & North Western Railway as the industry's consolidation continued.

The end of the passenger service also meant changes to the area around Liverpool Road Station, as demand for hospitality facilities dropped dramatically. Advertisements were placed by agent Joseph Green informing passengers that the service had moved to Hunt's Bank and reassuring traders that the goods station was operating as usual. But within a month of the change in services, there was just one hotel still open, and two shops and three dwellings opposite the station were offered to let at 'considerably reduced rates.'

However, we should not see the loss of passenger traffic as diminishing the importance of Liverpool Road station. It now became a goods depot of national standing, a significance that has tended to be subsumed in the 'first passenger station in the world' narrative that emerged in the mid-20th century. From 1842 to 1850, freight tonnage increased sevenfold nationally – a swifter increase than passenger receipts, which tripled over the same period. This rapid expansion in freight carriage meant that Liverpool Road Station required constant updating for the rest of the century, as new buildings, yards and tracks re-shaped the original layout.

New holding facilities for pigs were built along Charles Street in anticipation of this increase in the 1840s. Pig meat was the most accessible food for the working classes, who were often criticised by sanitary reformers for keeping live pigs in their backyards. The demand was so great and the railway so essential in supplying swine, that pig traffic reshaped the area. By August 1866, the Committee decided that pigs could be housed on Water Street under the arches of the Southern Junction and Liverpool Road, facilities in use by 1870, and a

slaughterhouse was also built. In June 1872, the Town Clerk reported that in the previous twelve months 96,000 pigs entered, but only 76,000 reported sold on the premises. The noise and stock movement (and smell) must have impacted those who lived in the Station Agent's House. The Borough's Markets Committee agreed to waive tolls for the LNWR for an annual rent of £175. A Shipping Shed reflected the growing market for fresh vegetables on the railway, and a bonded store held goods requiring excise duty (particularly imported alcohol).

These latter changes were precipitated by a major fire at the site on 23 May 1866. It is a miracle that the Station Agent's House escaped unscathed: the fire began in Cotton Warehouse 2 and soon spread to Cotton Warehouse 1 alongside. Station Agent Joseph Green had foreseen the vulnerability of these buildings to fire twenty-five years earlier, when he banned oil and turpentine from the Cotton Warehouses. His later successor, Thomas Kay, was perhaps more lax, and explosions during the fire were attributed to flammable materials stored in Cotton Warehouse 2, including oil, turpentine, soap and soda-ash. Cotton Warehouse 1 lived up to its name in contents; the 1830 Warehouse was described as 'the depot for goods coming from Liverpool' and its contents included butter, lard, tallow, flour and grain. The warehouses were timber framed; and as the three warehouses were connected by tramway bridges, the conflagration spread between them with ease. Superintendent Tozer of Manchester's chief fire station at Jackson's Row, about half a mile from Liverpool Road, used the telegraph network to summon fire brigades from the surrounding area for assistance. The firemen plied sixteen water jets fed by the mains water supply onto the fire. The Broughton and Pendleton volunteers and the Salford Fire Brigade made 'a gallant stand' at the bridge between the 1830 Warehouse and the western end of Warehouse 1, and this widely reported act saved the former building, and quite possibly the Station Agent's House too. Thomas Kay was not in the house that night; its contents were pre-emptively removed.

Plans to rebuild the parts of the station damaged by fire were swiftly instigated, with a tender for the construction of bridges and arches advertised in September 1866. By February 1867, the LNWR allocated £77,145 for major rebuilding.

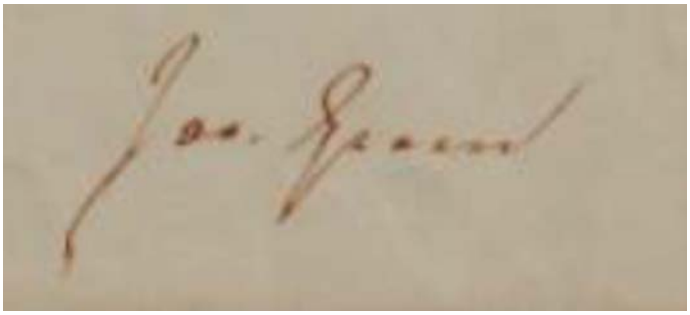
This phase of work saw the station through the rest of its active life, with no further large-scale structural changes after 1889. Although the 1830 uses are the most studied and remembered, and with the exception of the Station Agent's House and the 1830 Warehouse, what we see today are structures from this mid-Victorian phase. Haulage techniques continued to be modernised, introducing hydraulic power, and better water and gas supply. Gas lighting improved safety for goods being processed by day and night, and electricity arrived at the station in 1902. The station's development thus reflects the haphazard development of technologies, rather than a neat succession of developments, always forward-looking as it evolved from its early roots. By the 1871 census, the Station Superintendent (as the Agent was by then known) was housed elsewhere and the Station Agent's House let to non-railway tenants, as described next.

Who lived at the Station Agent's House?

The census data every ten years from 1841 is the most reliable source for tracing the past occupants of the Station Agent's House, although reading it is complicated by the house numbers on Liverpool Road changing. In 1841 the Station Agent's House was known as No. 41 Liverpool Road, but today, it is No. 48.

The very first resident of the house was John Rothwell, the dyemaster, for whom the house was built in 1808. Little is known about him nor if he was living in the house when the Byrom sisters sold it to the railway company.

Joseph Green (1776-1850); in residence 1830-1847



Joseph Green's signature

During the railway years, the first known resident was Joseph Green and his family, captured in residence on the night of the first ever census in 1841. Green was 65 in 1841 and his occupation is given as 'station agent'. In the early years, this rather vague term referred to duties such as managing passenger ticketing and goods loading and unloading.

In 1841, Joseph was living with two daughters, Elizabeth aged 30 and Frances aged 25, and a son William aged 20, listed as an engineer (so perhaps also working for the railway. William became a civil engineer in later life). They

had two live-in servants, Sarah Roach, who was born in Ireland and was 30, and Ann Hayes, aged 20.

When the railway opened in September 1830, Joseph would therefore have been 54, Elizabeth 20, Francis 15 and William 10 – an exciting day for them all, and we can imagine Joseph's children peeping out at the Duke of Wellington's carriage as it pulled up outside on the platform, or perhaps helping serve the fine guests their refreshments. Joseph Green was already an experienced transport manager and man of substance when took up his new position:

> 'Conscious that they lacked the experience of organising and managing a transport business, the Carrying Committee.....brought in their expertise in the shape of Andrew Comber as agent in Liverpool.....and Joseph Green (who also brought considerable industry experience) was appointed as agent in Manchester and both entered into their duties on 1 March 1830. Both had to file sureties of £1500 each "for the faithful discharge of their duties".' [2]

That the new agents were required to put up such considerable sums themselves for employment on the railway shows the enthusiasm it had generated. It also marks Green and Comber as already successful men of some means. Nothing has so far emerged about Green's earlier career, which was presumably goods management in the docks or on the canals, either of which provided useful and transferable skills for the railway.

Joseph Green's household was one of the first 'railway families' living in accommodation owned by a railway company, and so one of the earliest families to experience life alongside an urban station. Railway families as an imagined community were promoted by the paternalistic railway companies as the networks grew. The station agents found themselves in a new position of

[2] Anthony Dawson, *The Liverpool and Manchester Railway. An Operating History* (2020).

'pastoral' public authority for the commercial age, akin to a factory manager or (in a different sense) a vicar.

As a young man, Joseph had married Elizabeth Grundy on 22 April 1802 at Bolton le Moor, now part of Bolton. They soon moved to Manchester since one-year old Sarah, 'daughter of Joseph and Elizabeth Green, Spring Gardens', was buried at Manchester St James on January 25 1808, having died of 'fever'. Five years later, a son, Thomas was also buried, aged 11, on 22 Nov 1813. Spring Gardens is less than a mile from Liverpool Road. The deaths are a reminder of the difficult living and sanitary conditions at the time in the crowded streets of Manchester.

Their surviving son William who appears in the 1841 census was born c1821 and was plausibly the William Green baptised on 8 Sept 1821 in Manchester Cathedral, then a Collegiate church. This christening is not as grand as this sounds. Until 1850, the Collegiate Church was the parish church for the whole of Manchester which in 1821 had a population of 187,031. There were chapels of ease and churches of other denominations, but for an Anglican marriage, the Wardens and fellows of the Collegiate Church maintained their legal right to a fee of 3s. 6d. for all marriages conducted within their parish, despite the desperate poverty of many couples. The religious duty fell on the pastoral chaplain employed by the Warden and fellows, and from 1790 to 1821 this was the eccentric figure of the Revd. Joshua 'Jotty' Brookes, who took to solemnising marriages in batches, typically twenty or more at a time.

In 1821 alone, a total of 1,924 marriages were solemnized in the collegiate church. Regardless of status, all were subjected to Brookes' 'production line' methods. Often, the groom and his friends decamped to a nearby ale-house while the bride kept place in the queue; but if there were one groom too few when a group of couples lined up in front of the altar, Brookes notoriously would countenance no delay, but would continue the marriage with any passer-by (or

even one of the other grooms) as a proxy stand-in. Christenings were conducted in much the same way. Brookes is believed to have conducted more marriages, funerals and christenings than any English clergyman before or since.
By 1830, however, Green must have been a widower. His will, written in 1850 and witnessed by two of the railway clerks, refers only to bequests to his children with no mention of a wife. The will is largely standard wording with little of specific interest, but there is reference to the sale of property in Farringdon, Berks which Joseph had probably inherited from his parents (there was an innkeeper of The Angel and latterly a schoolmaster in Great Farringdon also called Jospeh Green who died in 1803). Green leaves his estate equally to his son William, to Lancashire collier John Langshaw and to Charles Smith, banker, 'late of Manchester.'

Joseph Green became a trusted employee of the LMR, for he remained their principal station agent when the company merged with the Grand Junction Railway on 4 July 1837. This connected the LMR with the growing network nationally, at Newton Junction, some 20 miles west of Manchester. The GJR used Liverpool Road as their Manchester terminus, and GJR employees worked alongside the LMR staff.

The railways were becoming more institutionalised and in 1837, the press carried reports of Green being 'admonished by the [Railway] Board'. There had been a strike because of the Railway Management Committee's cost cutting, especially of sickness and accident benefits. Instead, the men were expected to enrol in a new 'benefits club' through which they were expected to contribute from their wages against future illness or disability. Green was reprimanded because so few of his men had enrolled; this might indicate a certain sympathy on Green's part for his men's employment terms.

Green survived the admonition, and in September 1843, attempted to gain a liquor license for the station; he assured the Borough committee that such trade

would continue as usual, despite their concerns over inevitable changes after the proposed end to the passenger service at Liverpool Road. When the junction line to Victoria Station opened on 4 May 1844 and the Liverpool Road passenger terminal transferred to Hunt's Bank, as station superintendent Green placed adverts in local newspapers informing passengers the service had moved to Hunt's Bank and reassuring traders that the goods station was operating as usual.

Green oversaw major changes as the station switched to freight only, which grew exponentially. However, surrounding retail trade at Liverpool Road went into steep decline once passengers no longer stopped there. By 19 June 1844, there was only one hotel, The Railway & Commercial Inn, and two shops in the vicinity. It seems those involved with the goods traffic were not patrons of the hotel or nearby shops. Managing freight movements was noisy, physically demanding and, when livestock was involved, smelly. Working life thus changed considerably for Joseph Green during his 17 years' service. He retired in September 1847, at 71 years old.

(On the night of the 1851 census, a William Green and his wife Elizabeth were recorded as visitors at the house of George Wall, a 27-year-old hairdresser from Shardlow, and his family, who lived at 23 Liverpool Road, next door but one to the Station Agent's House. William was then aged 32 and a rail porter. Perhaps he was visiting his old haunts and neighbours?)

Edward Byron Noden(1847?-1857)

By the 1851 census, Edward Byron Noden was occupying the house as 'agent for the London & North Western' with which the LMR was now merged. With him were his mother, grandmother and aunts. Noden seems to have been a career railway man and judging from his will (which left bequests to an array of charities for the disabled and people with special needs), he never married. He left the London & North Western on May 30th 1857 after a service of 24 years,

having been head-hunted by the South Eastern railway to be their Goods Manager. The Railway Times of June 6th 1857 gives a verbatim account of his leaving presentation, in which Noden declared that during his time as station agent in Manchester, he had 'endeavoured to conciliate the goodwill of every member of the rail and canal interests'. He was clearly a popular man and his departure from LNW was widely reported. In the 1871 census, he was listed as a railway goods manager and living at 153 Old Kent Road, Southwark, now just with his aunt Frances and two servants.

Edward Byron Noden died in Brixton on 18 Dec 1880 (he was born in 1818). His career is an interesting example of the lifetime career possibilities opened up by the railways across the country, and that they moved with their dependents.

Samuel Salt? (c. 1850s)

According to the chapter 'Early English Goods Managers' in Miles Pennington's *Railways and Other Ways* (1894), the next station superintendent at Liverpool Road may have been Samuel Salt. Miles Pennington recalled 'I have a pleasant recollection of Mr Kay [whom we shall meet next], assistant to Mr Salt, and successor to that gentleman. Mr Kay occasionally visited Stoke upon Trent to see his friend and my colleague S. B. Shaw, when I made Mr K's [sic] acquaintance.' Samuel Salt was connected with the canal trade in his earlier career, and 'he afterwards commenced his railway career as goods manager of a district of the London & North Western, including their important freight establishment at Manchester. He was an energetic and straight-forward man, considered somewhat eccentric by those who knew him well.' Salt was a great statistical authority and published useful books with enticing titles like *Statistics and Calculations Essentially Necessary to Persons Connected With Railways Or Canals: Containing a Variety of Information Not to Be Found Elsewhere* and *Facts and Figures, Principally Relating to Railways and Commerce.* They were useful

reference guides for necessary transactions such as 'Calculation of Toll or Freight from ½ cwt to 20 tons at the various rates charged by carriers.'
Salt liked to put a suitable saying or proverb at the top of each table in his books, and these 'were a source of some merriment among the office boys of Manchester. In Mr Salt's absence, one of the boys would call out "A place for everything and everything in its place"; a voice from another part of the warehouse would call out "Salt", and so on. Though this was done in joke, it, after all, must have done good, as it tended to rivet these proverbs in the memories of the boys.'[3] It also reminds us of the clerical tasks associated with a large goods station, tracking the goods in and out. Thomas Kay, the next superintendent, rose from the ranks of these clerks. Examples of Salt's 'useful books' can be found on Google Books, but Landmarkers have been spared them in the bookcase.

Thomas Kay (1861 to before 1871)

The next station agent, or 'goods-superintendent' as the position had now become, was Thomas Kay (1824-1885+), who had joined the LMR in 1840 when he was just sixteen.[4] He rose to become 'chief goods manager of the London & North Western Railway, which was then considered the highest position of the kind in England.'[5] Kay is not traceable in the 1851 census but by 1861, he was resident at 48 Liverpool Road as 'Railway Manager' with his wife Eliza. Kay was 37 (he was born in Manchester in 1824, another Cathedral baptism) and is plausibly the 15-year-old Thomas Kay, warehouseman, who appears in the 1841 census as living at Manchester Piccadilly. By the time he married Eliza (a widow and silversmith's daughter) in 1849 (again part of a Cathedral cohort) he described himself as 'agent'. With the couple on the 1861 census night was William Hamilton, Thomas's stepson, aged 21 and a clerk.

[3] Miles Pennington's, *Railways and Other Ways* (1894), p. 63.
[4] *Railway News,* 19 December1885.
[5] Pennington.

Station Agent's House c1860. The colonnade under Stephenson's original Water Street bridge is still in place.

There is a newspaper description of Kay being presented with a 'handsome silver tea service' on 24 Feb 1849 by his clerks and others 'in compliment of his recent marriage and as a token of their esteem for him'.

In 1853, Kay was toasted at the London & North West's annual festivity, making clear that he was popular well-regarded:

> '*After the other toasts, songs and sentiments, the vice-chairman rose to propose the health of Mr Thomas Kay, goods-superintendent. He spoke with great warmth of feeling, and expressions of personal attachment to Mr Kay. He said he was a man that he loved, he had those virtues that most command attachment, he was talented, yet most unassuming, clear, quick, and sure, but yet without anything in the shape of dogmatism. A knowledge of railway business second to no man, yet free from egotism. To use words to describe his merits only beggared his subject, he knew all the men loved him and would say no more.*
>
> *Mr Thomas Kay responded and stated that he knew not any position that any man occupied in the service in that room that he had not been employed in. He had risen from a very early age in the railway service, and could well understand what each had to contend with - he was one of them, and so long as he had office with authority it would be his highest pleasure to exercise it for the best interest of the employer and the happiness of the employe*d (great cheering).'.[6]

However, Kay's time in the house was to prove eventful, since he was in post for the devastating 1866 fire. Kay was elsewhere on the night of the fire but several newspaper accounts describe real fears that the fire would engulf the North Western Offices and Kay's house, so much so that his furniture was taken out of it. In the event the fire was contained from spreading so far. The Carlisle Journal for 25th, May 1866, for example, recorded:

> *The offices of the company, Liverpool Road, and which once formed part of the Liverpool and Manchester terminal railway station, were saved, as was also the residence of Mr. Thomas Kay, the principal agent of the London and North Western Railway Company. Mr. Kay was absent from Manchester, but was communicated with by telegraph. The books and papers of the company and Mr. Kay's furniture were removed during the*

[6] *Railway Record,* 8 January 1853.

fire to place of safety. It is too soon to form estimate of damage sustained, but moderate calculations place it at over £100,000, and some people say it will probably be nearer to quarter of million.

The Manchester Courier for 24th May 1866 gave a fuller description of the fire and its vivid description is reproduced in the Appendix.

Kay was soon involved with another disaster, this time a fatal one. A guard on the Brighton Railway, Mr F. French, was killed in an explosion at Three Bridges station on 13 December 1868. A consignment of benzole (a spirit derived from coal tar, similar to petrol) had exploded on one of the line's trains, far from Manchester but potentially implicating Liverpool Road as shipping station. Newspaper reports give another insight into life on the railways:

EXPLOSION ON THE BRIGHTON RAILWAY.
The adjourned inquiry into the causes of the explosion on the London and Brighton line, at Three Bridges, on Sunday night, was resumed on before Mr. Black, coroner for the borough Brighton. The inquest, it will remembered, was opened upon Frank French, under guard of the goods train from Horsham to Tunbridge Wells; but since the adjournment the head guard, John Harris, has died from the injuries he received.

The first witness called the adjourned inquest yesterday was Mr, Robert Pierson Thicker, chemical manufacturer and oil merchant, of Liverpool, who gave evidence the contents of the casks which exploded. He said they were nine casks of refined naphtha, which were consigned by him to Dieppe, via London and North- Western Railway, and that they were accurately described in the consignment declaration. He produced sample of the naphtha taken from the casks in question, and said it was what was called in the trade "20 per cent benzole." Its specific gravity was 875. It would give off only a slight vapour at an ordinary temperature, and that not of highly inflammable nature. Nothing but flame would fire it. As a proof of what be stated, he added that during the hot weather last summer the thermometer stood ?? deg. in their naphtha-house—a refining-house, where lights were burning ; therefore, he said, there could not be much gas from it to permit them to do that. The casks in question were brandy hogsheads bound with extra iron hoops, and his theory of the cause of the accident was that the casks had either been smashed in shunting or that they had been tampered with by someone who had mistaken them for brandy. He did not believe that the guard going to the truck with his lamp would have caused the explosion unless the casks had been smashed or tampered with; but did not for a moment insinuate that the deceased tampered with

them. Without something had been done the casks, more vapour would have been given off than from strong gin, or turpentine.

Mr Thomas Kay, of Manchester, district goods manager of the London and North-Western Railway, was next called. He said he had been in that company's service nearly 27 years, 12 years of it in his present situation, and during the whole time had been acquainted with the carriage of naphtha. There were special regulations respecting the carriage of refined naphtha, except when sent in carboys, which were dangerous, owing to their liability to be broken; but when the naphtha was carried in casks it was not considered dangerous, and was treated as they would treat turpentine and ardent spirits, such like articles. There was the same absence of regulations respecting it on all other lines throughout England and Scotland; and when the casks in question were shifted from his company's line to the Brighton Company's line, there would be no intimation given to the servants of the latter of what they had in charge. He had never heard any accident occurring from naphtha when conveyed in casks.

Dr. Letheby, Professor of Chemistry to the London Hospitals, was called by the coroner. He said was very well acquainted with the liquids known as benzole and refined naphtha, he had had to examine samples of thousands of gallons for the Paris market. .....

He had read the evidence taken on the last occasion, and had no doubt at all that the refined naphtha in question had leaked, or had become diffused in the waggon, and the vapour mixing with air, had formed an explosive mixture, which was fired by the light of the lamp held by one of the deceased men, and the explosion resulted, the burning naphtha being blown over them. He had also heard the evidence given by Mr. Thacker and by Mr Kay, and was of opinion that the dangerous properties of naphtha were not sufficiently well known for the dangers which might arise from its being guarded against, for the leakage of into a confined truck might at any time by the approach of light be the cause of serious accident. Some regulations ought to be laid down for its carriage, and he thought there would be no difficulty in making regulation which would not interfere with the commerce of the article at all. ... A "Davy" lamp would have prevented the explosion.

In reply to Mr. Hawkins, traffic manager of the London and Brighton Company, he said the guard's lamp being closed was no protection, for whenever the air got in to feed the lamp the vapour would get in, but it would not get through the gauze wire of " Davy." He suggested that as casks, although safer than carboys, would not prevent the escape of vapour, that trucks used for the carriage of such articles should be provided with louvre openings at the top for the purposes of ventilation ; and that they should not be handed over from one company to another

without the contents being made known.—The Coroner having summed up, the room was cleared….

The resulting verdict declared *' That on the 13th day of Dec. Frank French died from shocks caused by burns all over the body, face, and limbs, received on the morning of the Saturday at Three Bridges, thereby ignition at the flame of a lamp, carried by one John Harris, of vapour given off at an ordinary temperature, from a product known as 'refined naphtha,' then being carried in barrels in the truck, and which vapour then fired the remainder of the said naphtha. And the jurors further find that the said product called refined naphtha is a dangerous article, and that its carriage should be the subject of special regulations, which should include means for giving information the guards and servants of any and every railway company carrying the same what the substance is which they are carrying."—An undertaking was given on behalf of the railway company that the recommendation of the jury should receive early consideration.*

By 1876 (and probably by 1871) Thomas Kay had moved on to become Chief Goods Manager at Euston Station. (*Hotels of Europe* 1876). He retired from service in December 1885 due to ill health, 'a most business-like and agreeable man.'

David Carson, draper (c1871-1891+)

By the 1871 census, the occupation of the Station Agent's House had changed. It was no longer lived in by railway employees after Thomas Kay relocated to London. In 1871, the house at 48 Liverpool Road was occupied by David Carson, aged 33, a draper born in Ayrshire in 1818, his wife Ann and an 11-year-old daughter Frances; also William Burgess and his young son, two daughters and a 16-year-old servant girl; and John Foster and John McMaster, both drapers and both also born in Scotland and possibly live-in apprentices to Carson. None seem to have had a direct connection with the railway.

By 1881 the Carsons were sole occupants, and they were still there in 1891 when David was 76 (and still giving his occupation as draper). Perhaps the ground floor had become a draper's shop by now, although Carson also appears

in trade directories as a 'travelling draper'. (Post Office Directory of Manchester 1873).

Richard Fletcher (1850-1927), in residence by1901 – 1911+.

In 1901, the house is once more being lived in by a railway employee. 52-year old Richard Fletcher, 'chief foreman' for the London & North Western, is head of household, with his wife Elizabeth and two daughters, Annie and Edith, a family that originated in the Welsh Marches in modest circumstances. Richard was born in Church Stoke in Shropshire and his father was a labourer and gardener. Elizabeth Eaton, whom he married in 1871, was the daughter of a shoemaker from Montgomery. Richard gave his occupation at marriage as 'tilemaker.' By 1881, the couple were living in Shrewsbury and he had joined the railway, now a 'railway goods warehouseman' as he was in the 1891 census, although the family had moved to Anglesey by then. The Fletchers were still in the house in 1911, by when Richard had been promoted to Inspector. The house is recorded as having 12 rooms. Fletcher's rise to chief foreman in Manchester is another example of the social and geographical mobility afforded by employment on the railways for able men.

Moving further into the 20th century, residents of the house prove more elusive. The house is not identifiable in the 1921 census and it seems that there were few people living on the north side of the station stretch of Liverpool Road. The area had become increasingly given over to the goods yards. By the wartime years, the house hosted a sausage maker, J & F Slater, who presumably lived over the shop. In the Manchester Evening News an advert was placed on 28 February 1944 seeking a 'useful man for cutting up and sausage linking' for J & F Slater Ltd, 48 Liverpool Road. Another dated 8 August 1958 sought a 'butcher/driver for sausage manufacturing business. 5 day week', again for the Slaters, still in business at No. 48. A later photo, undated but probably from the 1970s, shows the shop now held a car parts store, Shelley Bros. Ltd. The next chapter will trace what had been happening to the railway in these years.

The Station in the 20th century

In 1894, the opening of the Manchester Ship Canal meant competition for haulage of freight by rail. This 'big ditch' brought large, seafaring vessels into Salford and Manchester via Runcorn. The new docks threatened the Port of Liverpool rail links as well as existing waterways into Manchester. Liverpool Road was still a thriving station, but a new note began to creep into how the site was seen, no longer as the vision of the future but a place of nostalgia and local pride. When the City Corporation proposed demolition of Stephenson's viaduct for a street-widening scheme in 1904, a lively debate campaign ensued over what was to happen to 'one of the oldest railway bridges in the country'. It was a chance for the Manchester press to revisit the railway's origins and their pride at the city's participation and achievement in this technological advance. Despite proposals to erect some of Stephenson's cast iron Doric columns as a civic monument in a local park, little came of the campaign largely because of the cost of removal, but the flame of nostalgia and renewed appreciation had been fanned.

In 1921, the Railways Act rationalised the majority of the railways in Britain into the 'Big Four' groupings, creating vast railway systems with effect from 1 January 1923. London Midlands & Scottish Railway (LMS) was the largest of the four, absorbing the LNWR lines in the North West and London alongside some Welsh and Scottish railways and the Midland Railway. The 'Big Four' were keen to establish their longer history by celebrating the heritage of their subsidiary lines. For both municipal authorities and businesses alike, public celebrations and pageantry were now an opportunity for publicity. In 1925, the anniversary of the Stockton & Darlington was an important moment for railway workers and enthusiasts, as well as for Stockton and Darlington residents, and, perhaps surprisingly, Mancunians. A committee of railway workers and 'railwaymen's wives' put together a 'Railway Man's Pageant' at Belle Vue in Manchester on 27 September 1925, the precise centenary of the S&D Railway.

When the LMR's centenary came round in September 1930, Liverpool provided the main initiative for a civic celebration, with funding from the LMS. The inclusion of Manchester in the weeklong celebrations was largely due to the goodwill of the Organising Committee, who offered to make the Mayor of Manchester a co-president alongside Liverpool's. A trip along the original line and with a visit to Manchester and a stop at 'the original Manchester Station' was agreed in a 'Pageant of Transport'. In the event, celebrations centred on Liverpool Road: Edge Hill station was explored but discounted at the Liverpool end, and Crown Street was in a poor state of repair, re-used as a goods and coal yard, its 1830 passenger buildings anyway incomplete. By contrast, at Liverpool Road the re-use of passenger facilities as freight offices and storerooms had ensured that the Regency building was preserved. This authenticity of the LMR site and infrastructure was important to the Centenary organisers who welcomed the suggestion of an excursion 'on the actual line' to Manchester by Mayor Robert Barclay. On 15 September 1930, and despite a certain tiredness in the structures of this working goods station, Liverpool Road Station became the centre of events for the centenary of the LMR.

The visit to Liverpool Road Station by the two mayors and municipal and railway officials attracted press coverage in provincial and national papers alike. As the Station had not received passengers since May 1844, the party travelled along the original line but then diverted at the Ordsall Junction to arrive at Victoria Station. From there, a procession of cars travelled across the city to Liverpool Road Station, which was adorned with bunting and union jacks. A commemorative plaque was ceremonially mounted on the station's street level façade, where it remained until the 1970s. Employees of the Station, interviewed in 1980, recalled it was 'regarded as an ordinary working day', although office staff were permitted to view the unveiling of the plaque.

Through all this, Liverpool Road remained a busy goods station, the area around reflecting this workaday but essential purpose. The Passenger Building had long served as railway offices; the Station Agent's House was in multi household use. Between the wars, the ground floor was converted into a shop, its frontages altered to provide corner shop windows for, variously, a sausage maker and a car parts store.

After the Second World War, decline set in. Nationalisation of the railways in 1947 paved the way for efficiency savings, but the newly-formed British Railways (BR) was already facing a battle for goods haulage. Motorised road transport had little impact on the railways' long-distance goods traffic before the war, but with the beginning of motorway construction in the late 1950s, an irreversible change set in, however misguided that might seem today. Road hauliers could provide door-to-door service, removing transhipment costs and making rail haulage less competitive. The introduction of container ships also brought a new era of goods handling: containerised freight needs no warehousing. Liverpool Road Station survived the closures that arose from the 1963 Beeching Report, which focused on underused rural passenger lines, reducing the size of the rail network by more than a fifth between 1965 and 1970. However, Liverpool Road's days were now numbered as a working station, and in 1975, British Rail announced its closure.

By now, the station had long been recognised as a place of memory. The 1830 passenger building was earmarked for listing in 1959 and in 1963, the Station Building was officially listed Grade I, just a year after the infamous demolition of the Euston Arch, the 1838 neo-classical Doric archway that marked the entrance to Euston Station in London. The arch's demolition by British Railways created a public outcry, spearheaded by public figures such as John Betjeman and highlighting the importance of protecting and preserving the country's now disappearing railway heritage.

In 1976, the surviving 1830s buildings at Liverpool Road were offered to Greater Manchester Council (GMC) by British Rail for £1, but GMC declined the offer because of the high cost of repairs needed. Local historical and preservation societies became increasingly concerned about the lack of progress, both in resolving the station's future and in planning a suitable celebration of the Liverpool Manchester Railway's 150th anniversary in 1980. The Manchester branch of the Victorian Society organised a meeting of interested parties in December 1977, and as a result the Liverpool Road Station Society was founded in early 1978. The Society's aims were to secure the restoration of the building for museum use and to ensure that Liverpool Road Station played a prominent role in the 1980 celebrations. The Society was invited to join a committee, already set up by British Rail and the county councils of Greater Manchester and Merseyside, to plan the 150th anniversary celebrations. The Society soon came to play a pivotal role in the eventual rescue of Liverpool Road and the wider regeneration of Castlefield.

The 150th anniversary was celebrated with a number of events throughout 1980, among them a cavalcade at Rainhill in May that included replicas of the competition locomotives, the *Novelty, Sans Pareil* and *Rocket*. On 14 September 1980, the LMR's *Lion,* an actual 1837 engine, pulled passengers in three replica carriages from Eccles to Liverpool Road, having been returned to steam for the celebrations (with the addition of modern air brakes).

Meanwhile, Manchester's civic pride in its industrial heritage was growing and crystallising. In 1963, a joint committee was formed of representatives from the University of Manchester Institute of Science and Technology (UMIST), the University of Manchester, and Manchester City Council, to investigate the establishment of a museum of science and industry in Manchester. UMIST began to collect historic artefacts to form the basis for the new museum.

The LMR's 1837 steam locomotive *Lion* heading towards Salford through the cutting now partly covered by the M602 road, during the celebrations of the 150th anniversary of the LMR.

In October 1969, the Manchester Institute of Science and Technology opened in temporary premises on Grosvenor Street, a point midway point between the UMIST and Victoria University campuses. By 1972, it was re-named the North Western Museum of Science and Industry (NWMSI) to reflect its growing regional role and a new, larger home was sought. Liverpool Road's increasing dilapidation was now attracting growing criticism from railway enthusiasts and amenity societies who were campaigning for its restoration. Its reputation as 'the oldest passenger station in the world' was by now well-established and ad hoc tourism to the site continued. In May 1973, the 1830 Warehouse was also listed as architecturally significant, bringing one of the freight buildings into the campaign for the first time.

When the Greater Manchester Council (GMC) was created in 1974, it took on its predecessor's role of co-funder of the Museum of Science and Industry. Then late in 1978, British Rail made an improved offer to GMC: as well as handing over the Passenger Station (which includes the Station Agent's House) and the 1830 Warehouse for the price of £1, it would contribute £100,000 towards the restoration costs. This time the offer was accepted, and after years of debate, a consensus coalesced around Liverpool Road as the location for the relocated museum, appropriately timed for the celebration of the LMR's 150th anniversary in 1980. One of the first projects was to restore the Station Agent's House as the museum staff's offices. Its exterior was accurately restored to its original Regency appearance: the 20th-century shop windows were replaced by the recreated windows and a new front door with handsome doorcase reinstated. Inside, the rooms, some already altered, were pragmatically laid out for office use (it is not known whether the removal of the first floor partition walls date to this intervention or whether this had already happened). The booking halls and waiting rooms of the Passenger Station were to be exhibition space. These too had been altered over the years to accommodate new uses and the scheme returned them largely to their original configurations.

Station Agent's House in the mid-20th century, then Slater's the sausage shop.

Station Agent's House as a cart parts dealer, 1975.

The station buildings under repair by the museum, c1980.

In 1983, the museum was reborn again as the Greater Manchester Museum of Science & Industry, narrowing its primary geographical focus to Greater Manchester. The station buildings on the wider site were now considered an important part of the Museum's collections. As it gradually restored and developed the buildings on the site, gathering the funding from many sources over many years to do so, the Museum went through multiple re-brandings until 2018, when, as the Science & Industry Museum, it joined the Science Museum Group. This group accounts itself 'the world's leading group of science museums' with an 'unparalleled collection' spanning science, technology, engineering, mathematics and science. As well as the Science and Industry Museum, the Group encompasses the Science Museum in London, the National Railway Museum in York, Locomotion in Shildon, the National Science and Media Museum in Bradford, and the Science and Innovation Park in Wiltshire.

The first phase of museum opened on 15 September 1983, including the Passenger Office and since then it has gone from strength to strength, turning Castlefield into a major cultural hub. However, as the wider museum site was

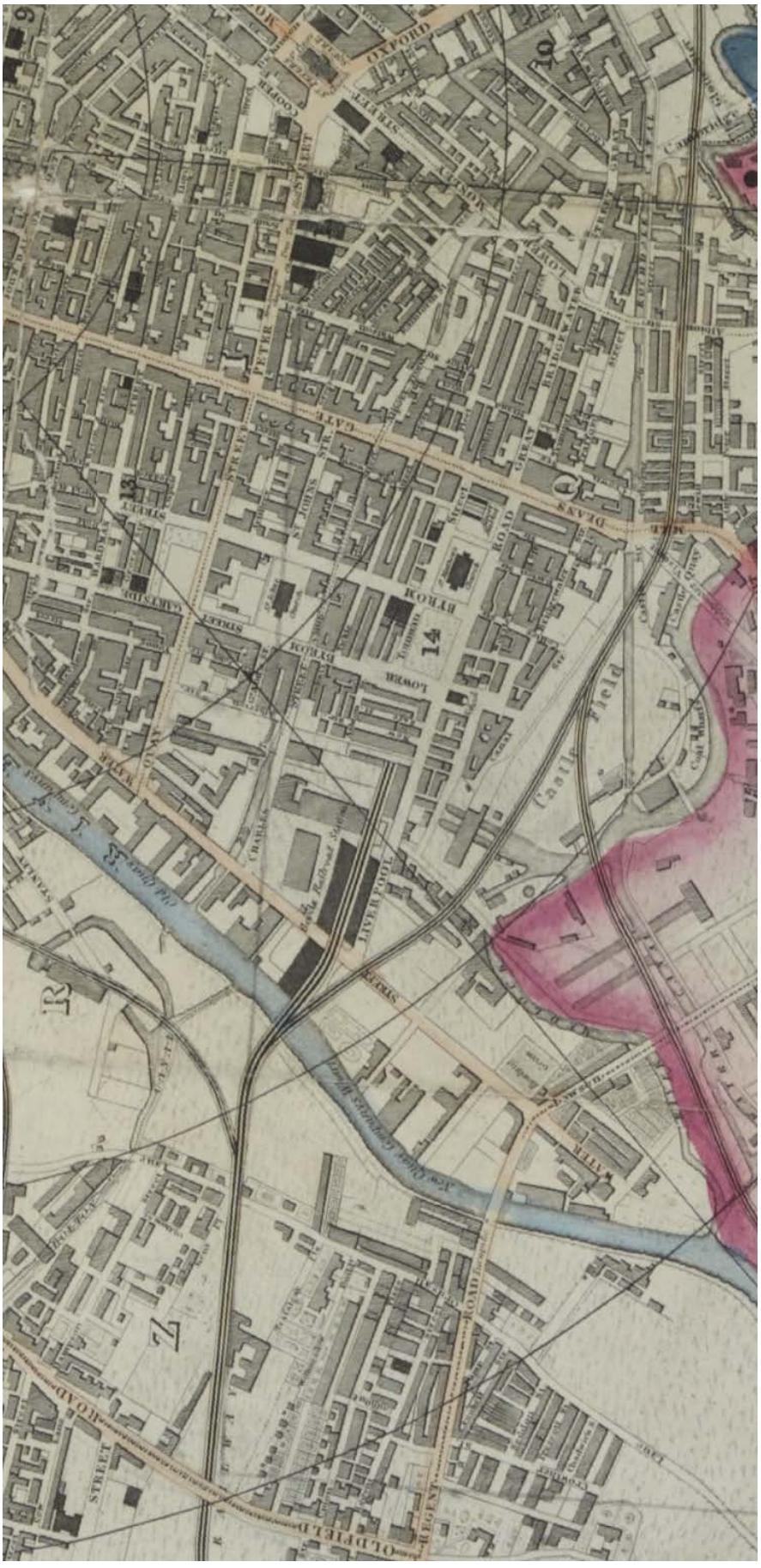
redeveloped and brought into use, by the 2020s, the Station Agent's House (and to a lesser extent the Passenger Building) were left on the side-lines, crucial in their historical significance and contribution to the scene but without any particular purpose. The Passenger Building has once more become something of a portal into the wider site and an adaptable exhibition space; the future of the Station Agent's House was less clear. Its size and layout made it unsuitable as gallery space and the condition of its fabric was an increasing cause of concern. When the Science and Industry Museum approached Landmark for help with a new use and form of access in 2021, the site's railway provenance and exciting present day facilities made us keen to help with the Museum's plan to enable visitors to experience every part of this globally significant industrial heritage site's seven-acre footprint.

Life in Victorian Castlefield

The neighbourhood immediately around Liverpool Road Station was known as Castlefield, named after the open space along Liverpool Road that carried semantic echoes from the Roman camps in the area. This small area of Manchester from the southern end of Deansgate to Water Street along the River Irwell was a neighbourhood where places of home, work and leisure overlapped considerably. The area had been industrial in character long before the arrival of the railway, and contemporaries tended to regard it as working class and prone to nuisance. Henry Booth suggested the traveller for pleasure should leave the district 'without loss of time.' Such views no doubt contributed to the early relocation of passenger services. Liverpool Road lay beyond the Quay Street 'boundary' of the business district, whereas Victoria Station was closer to the Exchange, the commercial centre of Manchester. On the other side of Liverpool Road from the station was an open area of ground called Camp Field, another echo from the Roman era and used for gatherings and markets.

Manchester's burgeoning middle class and civic authorities presented Castlefield as dangerous, with slum housing, a radical meeting hall and illicit working-class recreations. However, the social make-up of the area in the census returns, trade directories and municipal records reveals a more varied social space. For example, Richard Cobden, Anti-Corn Law League founder and key figure of the 'Manchester School' of liberalism, lived in the former Byrom residence on Quay Street from 1836.

German political theorist Friedrich Engels also had links with the area. Engels published his anti-capitalist polemic *The Condition of the English Working Class* (1845) based on his first-hand observation of Manchester and Salford. He had been sent to live in the city aged 22 by his wealthy industrialist parents in 1842, to work in a German-owned sewing thread factory in Weaste, Salford, a couple of miles from Castlefield. His parents hoped the experience would rid him of his radical ideas, but the experience had the opposite effect.



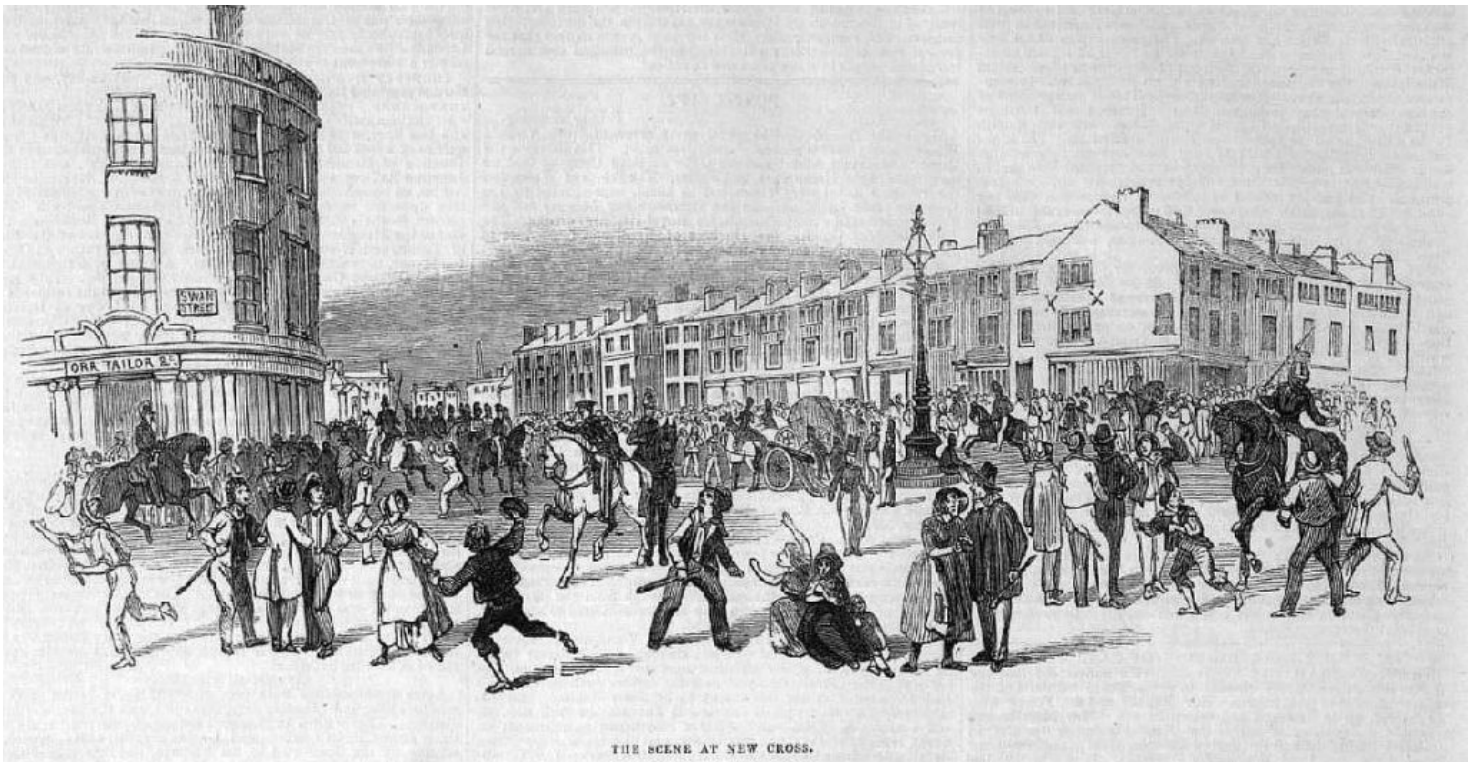
1848 map of Liverpool Road Station.

Engels was shown around the area by his lover, Mary Burns, an Irish girl who worked in the factory. Engels perceived 'the grim future of capitalism and the industrial age' in Manchester's streets. He described the progression along Deansgate from the business district southwards: '... less inviting shops, which grow dirtier and more interrupted by beerhouses and gin palaces the farther one goes, until at the southern end the appearance of the shops leaves no doubt that workers only are their customers'.

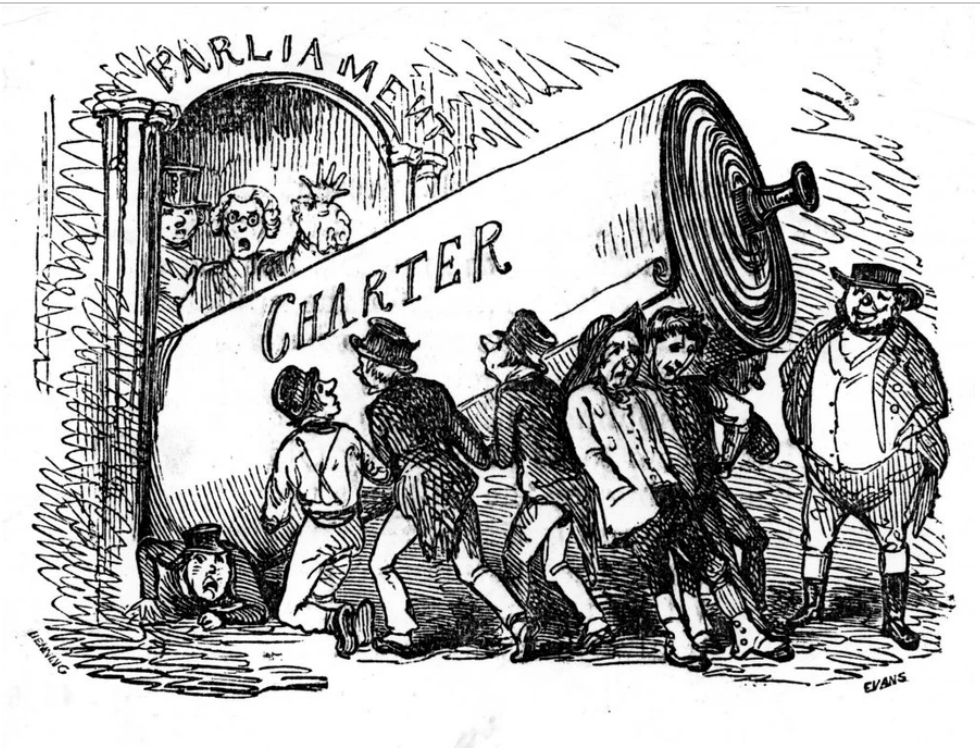
Castlefield was indeed a crowded, vibrant area. There is no doubt that the passenger railway gave the area an initial boost. The 1841 census show a variety of trades and professions being carried out by Liverpool Road residents. People of different incomes and social standing lived alongside each other, with most residents in working class and lower middle-class professions. Households employed in the textile industry ranged from unskilled factory workers to trades like fustian cutter, silk winder to hatmaker and tailor. Several people are listed as brokers, middlemen between manufacturers and buyers, most likely working in the cotton trade. Small business owners included a butcher and shopkeeper, alongside watermen, who worked on the canals, and warehousemen, who worked for the canal or railway companies.

When Joseph Green lived in the Station Agent's House, Hamlet Harrison, manager of the GJR goods office, was residing on the corner of Water Street with his family. Nearby streets housed other railway employees, like Edward Robinson, a railway guard who lived on Grindle Street from 1834 to 1842.
By 1843, there were several beer retailers and five public houses along Liverpool Road: the White Lion, Oxnoble, Railway and Quay Inn, Queen's Arms and the Railway Hotel.

Transportation by any of these means was too expensive for the average worker; most early railways did not offer a third class of carriage until a law introducing them was passed in 1844.



Protesters march past New Cross in Manchester, a mile or so from Liverpool Road, during the 1842 strike.



Contemporary cartoon satirising the Chartists' powerlessness against Westminster.

The LMR was therefore not a viable means of regular transport for most local residents and workers, but the special excursion trains that ran during key holiday periods like Whitsun or to the races were hugely popular.

There was a strong tradition of co-operative self-improvement in Castlefield. Nearby Salford was an important centre for those inspired by the writings and ideas of the Welsh textile manufacturer and social reformer, Robert Owen, who urged workers to set up Co-operative schools and reading rooms. In 1840 a Hall of Science on the corner of Byrom Street and Tonman Street was opened by Owen himself. The building cost £7,000 and was the largest lecture hall in Manchester, holding over 3,000 people. Its motto was 'Sacred to the Investigation of Truth'. There were evening and Sunday lectures, and also concerts, parties and excursions. The Sunday school had 250 pupils by 1842. The hall also attracted opposition: in April 1840, an attempt was made to burn it down. Materially and intellectually, the Hall of Science represented working class politics in the area. It hosted talks by speakers from the Chartists, a working class movement that campaigned nationwide in the 1840s for political rights and influence for the working classes after the Great Reform Act of 1832 failed to introduce votes for all men. The Chartists drew up a 'charter' of demands and a petition presented to Parliament in 1838 had gathered 1.25m signatures. The Hall's activities also give insight into women's involvement, which is often difficult to glean from railway or municipal records. Unlike educational establishments for workers like Mechanics Institutes, the Hall welcomed women and encouraged their attendance at events with lower ticket prices, like the ball held on 27 November 1841 which charged ladies 9d, while men's tickets were 1s 3d. Press reports of a riot on 8 March 1842 at a lecture by Fergus O'Connor for the repeal of the Union between Britain and Ireland highlighted the presence of 'shrieking females'. During the Chartist 'plug riots' in August 1842, the Hall was the meeting place of a trade union of textiles dyers, who gathered to vote on whether to support striking mill workers. Station Agent Joseph Green reporting the local agitation to the Directors of the LMR.

Liverpool Road Station was not only close to the events at the Hall of Science, but was also used in the government's response when military force was used for the suppression of the disturbance. This may be the first time the railways were used to move troops to quash civil unrest; reports suggest 700 troops entered Manchester via the station. Here was another role for the railway: the LMR, owned by private shareholders, provided the transport for government forces when public unrest was feared. The spectre of the Peterloo Massacre of 1819 made Manchester's authorities particularly fearful of unrest.

The Hall of Science provided a formal setting for the exchange of information and ideas apart from the mainstream liberal political culture of 1840s Manchester. The municipal authorities continued to identify Castlefield as an area 'ripe for improvement', using this to justify civic interventions, and indeed house demolition for the expansion of the station. In such a restive area, it was perhaps inevitable that the authorities viewed it with unease. A civic mandate for the 'improvement' of Castlefield was explicit in 1853 when the City Corporation opened Manchester's first Free Public Library in the Hall of Science. Castlefield now became a key civic area for the polite urban public sphere. Visitors to the Castlefield Library had little choice but to face slum housing and the adjacent industrial zone. As the Library opened, sixty-nine houses were being cleared for the extension of Liverpool Road Station. Camp Field continued to host demonstrations and meetings for anything from trade union meetings to the women's temperance movement in the 1860s and 1870s, and these political uses reinforced perceptions that the area was dangerous and subversive.

Evidence from the 1853 New Streets Act confirms the poor state of dwellings adjacent to the Station. Many of the fifty-nine properties scheduled for demolition to make way for the Shipping Shed were listed as 'cellar, dwelling, and premises', indicating the division of properties between different families living above and below ground, a common occurrence in the crowded slum areas of mid-nineteenth century Manchester.

An important annual event was Knott Mill Fair held on the Camp Field for about two weeks every Easter, the 'annual resort of the working classes'. Initially a small affair, Knott Mill Fair grew to take over the southern end of Deansgate and Liverpool Road. The fair boasted fortune tellers, peep shows, steam-powered fairground rides, ballad singers, 'try your strength' machines and more. The number of stalls selling trinkets, gingerbread, sweetmeats – over 500 by the middle of the century - led to complaints that the fair clogged up the street making Deansgate 'inconveniently narrow'. Circuses, menageries and pantomimes returned annually, and there was a famous second-hand clothes market, Knott Mill Fair. All this had all the dubious charm of any fair for the respectable middle classes and the danger of pick-pocketing was highlighted. The notorious danger of the area at night-time was acknowledged even in the promotional Penny Guide to the Knott Mill Fair in 1868:

> 'Some people will tell you not to go to such a place of levity as Knott Mill Fair. Take no notice of them: they would humgudgeon you… Youth is a time for enjoyment. By them Knott Mill Fair should be visited – in the day time. Night is a time fraught with danger owing to the roughness of certain gangs of dirty, low and common men.'

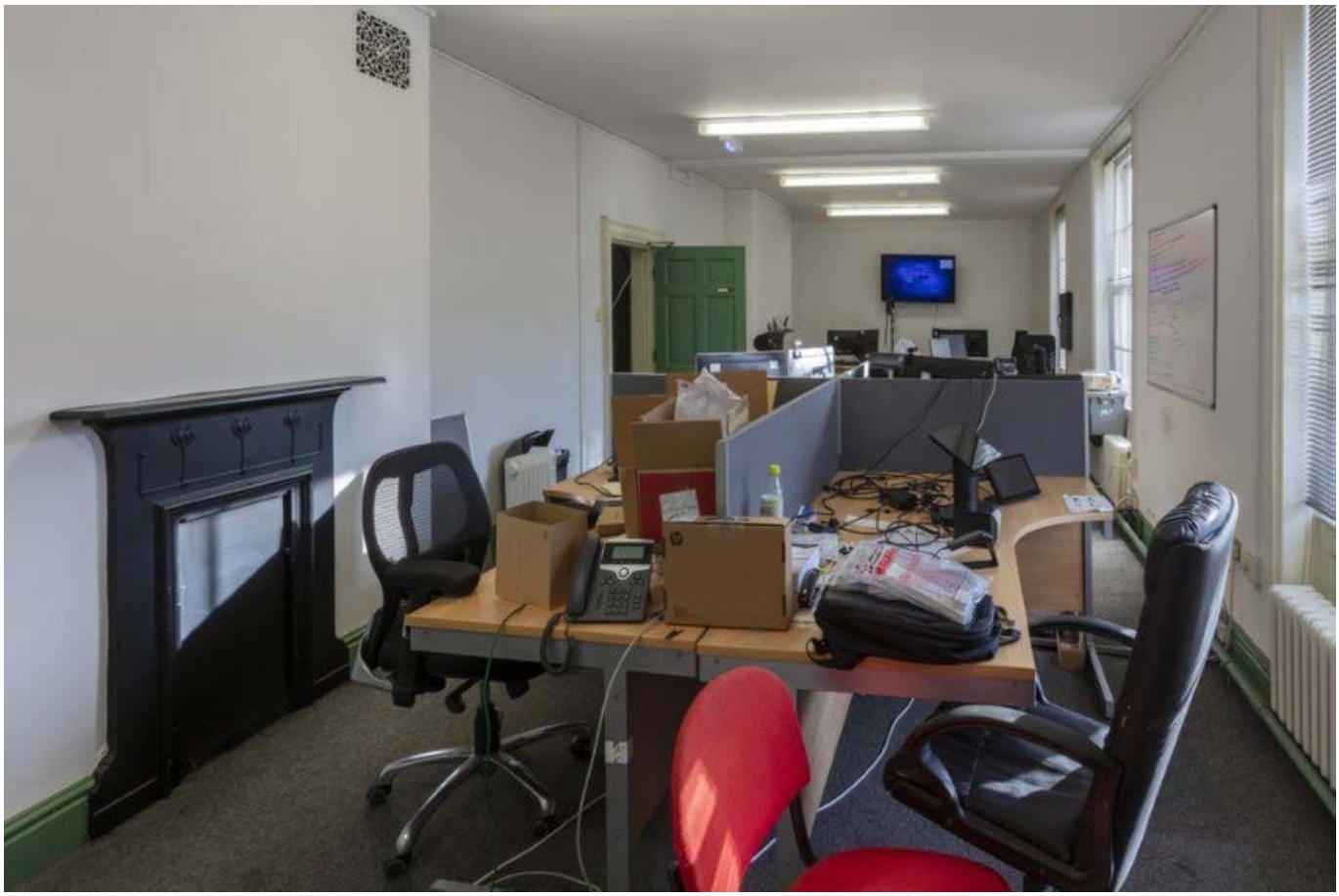
Liverpool Road Station was in any case attended throughout the night, as the Station was a twenty-four-hour operation and employed night policemen and watchmen.

By the 1880s, Liverpool Road's industrial buildings were concealed from the public view from the corner of Deansgate. A new lending library was built to replace the Castlefield Library and ten 'handsome shops' with brick and stone dressings concealed other traders, particularly fishmongers who occupied the row behind the frontage, along with two fine new Market Halls. Before the opening of the Upper Market Hall, William Fair, a shopkeeper on Great Bridgewater Street led a petition of 127 local businessmen to the Markets Committee.

Lower Campfield Market Hall, built in 1878. From 1983-85 it housed Manchester City Council's Air and Space Museum. This then became the North Western Museum of Science and Industry, until transferring to the Science Museum Group in 2012 and its content being absorbed by the Science & Industry Museum. The Hall is now (2024) being developed as a creative, tech and media hub, as is the Upper Market Hall (below, built in 1883).

The petitioners lamented the closure of the Campfield market: 'since closing the market our receipts for sales has decreased, more than one half in consequence of the attractions of a public market having ceased, which was of material assistance to us'. The traders complained that 'the high prices asked as Market rents [in the new Hall] have driven would be tenants to other markets distant from this district'. By the time the Upper Market Hall was complete, its swift re-use as an exhibition hall illustrates how trade was failing in Campfield. The area was being gradually sanitised of its unruly politics, as the boundaries crystallised between the industrial spaces of rail freight and the civic areas gentrified by the Corporation, and the close packed intimacy of the 19th-century terraces gave way to redeveloped, widened streets, which have mostly ceded in their turn to today's plate glass frontages as this flexible and responsive city moves forward to its next incarnation. The Station Agent's House, a true survivor, stands on its corner alongside the Passenger Building, both secure in their quiet Regency dignity, unassuming lynchpins of everything that ebbs and flows around them.

***Factory Girls at the Old Clothes Fair, Knott Mill,* Frederick James Shields (1889), widely reproduced as an engraving.**



Station Agent's House as it came to Landmark during the clearout in 2022, all rooms until recently in use as offices for the museum IT team.

Refurbishing The Station Agent's House

While the exterior of the Station Agent's House looks much the same as it did in the early 19th-century, one only has to compare the mid-20th century photos with how it has looked since 1980 to realise that not all is quite as it seems, both externally and, even more so, internally. After being used for multiple occupation and then converted into a shop, when the museum took the house on in the late 1970s, they restored the exterior carefully to its original appearance. This means that both the ground floor fenestration and the front door and its classical doorcase are in fact 1980s work, as were all the other window frames. From the early engravings, it looks as though the blocked windows on the corner angle were built blind and so we have left them as such.

How much the interior had changed over the decades and how much making good was done internally by the museum in the 1980s is not entirely clear. As handed over to Landmark, the rooms throughout had that sad air of abandoned offices, with utilitarian lighting and cabling. The front first floor rooms had been adapted as a single open-plan office, and we discovered that most of the internal 1980s making good was done in breeze blocks with gypsum plaster as the decorative finish. Only one mantelpiece was found to be original. However, the rest of floorplan was intact and the elegant oval staircase with its moulded wooden handrail curving its way up three floors and iron bannisters were all original, even if almost all the other original fixtures and fittings had been lost.

The building's Grade I listing therefore applied primarily to its external role in the streetscape, so keeping that as we found it was never in doubt, the only exception being the addition of a discrete new entrance in the rear yard for wheel chair access (necessary as the front door is raised from the pavement by three steps).

Internally, we had to think hard about our approach. This was never a purpose-built Victorian station master's house in the way that (for example) Landmark's Alton Station on the North Staffordshire or Coed-y-Bleiddiau on the Blaenau Ffestiniog are. This meant that a more pragmatic approach could be taken to repair and presentation internally. We also appreciated the fantastic south-facing panorama across the city skyscape from the open plan room on the first floor, a palimpsest fronted by the early railway bridges and curtained by the high rise buildings of the modern city, which we felt was something to highlight and celebrate rather than diminish by re-partitioning the space. In any case, the original first floor layout was unknown, so any reinstatement could only ever be speculative. This room was an obvious choice to make into a bright and communal combined sitting/kitchen/dining area. As the 'pin' that placed the world's first passenger station on the map, and anchored its development over the next 200 years, the house has watched the area around it shape-shift and evolve, as new engineering technologies were trialled. The Science & Industry Museum is the latest embodiment of this, an organisation that looks to the future as much as the past, and our treatment of the interiors of Statin Agent's House is in the same spirit.

Landmark's intervention therefore offered an opportunity to share the same spirit, to develop and test our own offering to deliver accessibility and environmental sustainability. At a technical level, we have introduced state-of-the-art insulation and renewable energy systems with remote control heating systems, to optimise the building's energy efficiency and responsiveness. The house has therefore been both refurbished and lightly adapted for the requirements of life in the 21st century, all unexpectedly closely scrutinised (inside as well as out) by the Manchester City planners. Work started on site in April 2023 and completed almost exactly a year later.

The exterior of the house in 2022.

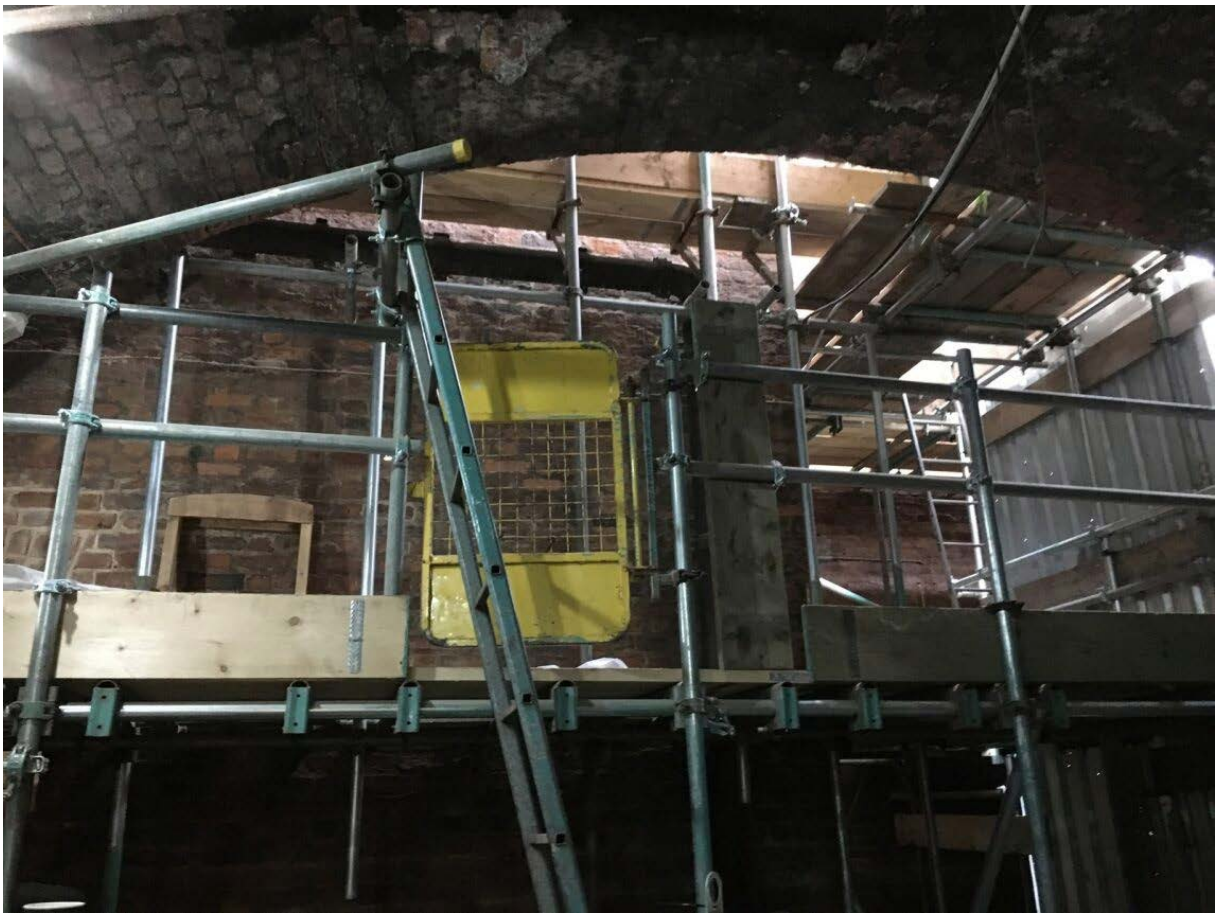
Roofing works: improving the lead detailing at a slope joint and re-using salvaged slates.

The whole house was scaffolded for repairs to the early 19th-century brickwork, which was found to be high quality work in itself, but it was only now apparent how far the existing cement pointing had eroded the bricks. The necessary re-pointing was an unanticipated cost, with care taken to keep the fine sharpness of this pointing in the tight joints. A creamy coloured lime mortar was used to match the original, sitting slightly back from the face of the brick. The house also needed re-roofing, with enough original slate salvaged to complete the road-facing elevation.

Hot water for heating and occupants' use is supplied by an air source heat pump (ASHP), the plant being housed in the cellar below the house. We had hoped to install underfloor heating on all floors but the joists proved too narrow and so radiators specifically designed for use with ASHPs were installed instead. The external walls were stripped of their cold 1980s gypsum finish and lime plaster was laid that incorporates tiny fragments of cork for better heat retention. The plasterers found this hard to work with at first, as the plaster was reluctant to adhere. As a solution, metal mesh was used for a foundation 'splatter coat', with two float (smooth) coats to finish the surface. The attic was insulated with sheep's wool.

Our architect Andrew Wiles took great care designing the new skirting boards and door architraves to ensure they are appropriate in scale and design. The 1980s chipboard floors were removed and new redwood pine floors were installed, cut into good thick boards, 200mm wide and 25mm thick and insulated with mineral wool, which also allows for sound insulation and fire resistance.

Drainage in the rear yard had to be improved before we could install the new entrance. The ground floor is fully accessible and holds a platform hoist to the main ground floor level, two bedrooms, a bathroom and lift up to the first floor. The strikingly curved chimney breast in the lefthand bedroom appears to be original.



A forest of scaffolding at the rear of the building.

Significant repairs were needed to the brickwork, where inappropriate modern-day cement pointing had been used, trapping water so the bricks were beginning to decay.

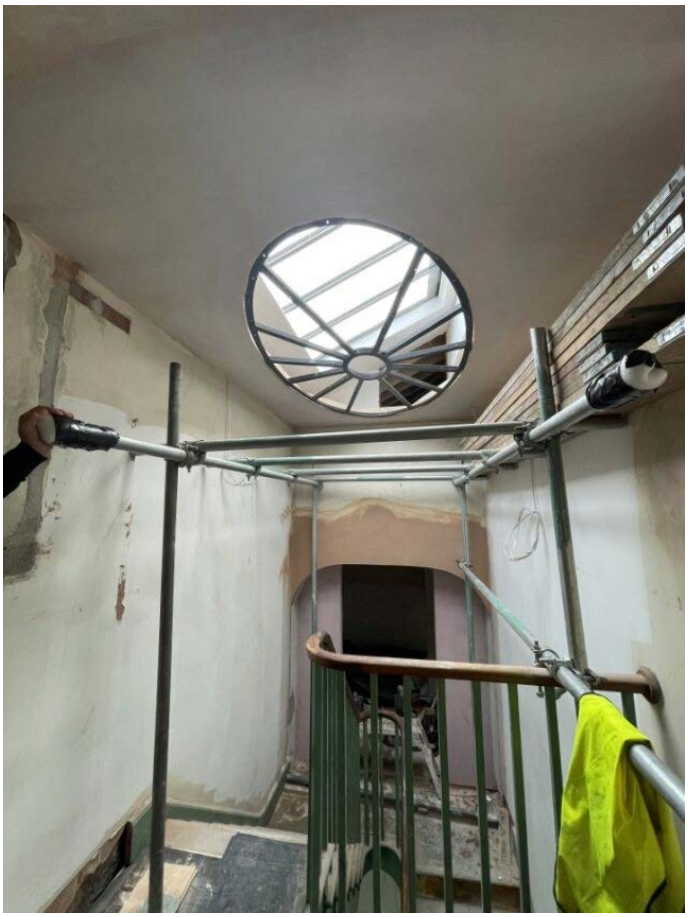
Inappropriate cement pointing (top left) was painstakingly raked out and replaced with lime mortar as originally. The original Regency brickwork is of very high quality.

Originally, the Station Agent had a link up a short flight of internal steps to the Passenger Building but this was closed off.

On the first floor, parquet was laid in the open-plan room, which now became a combined sitting, kitchen and dining area, the kitchen being made by Walkers' joiners of plywood which was widely used in the 1930s. A new hearthstone in local grey limestone has been fitted for a stove to stand on. There is a reminder of the lives of the earlier railway men who lived and worked here, in the form of a small cast iron safe built into the external wall. One original fireplace has been relocated from the bathroom into the study at the rear of the first floor. The bathrooms have all been given green and white tiles in a nod to the Art Deco style of the 1930s.

All the ceilings were fireboarded to ensure full compliance with the fire regulations. The draughty 1980s single-glazed sash windows were replaced with bespoke spring-operated, double-glazed sash frames, each new window frame taking Walkers' joiners 4 ½ days to make.

The stairs, with their iron bannisters and full-length, curving wooden handrail, are original. At the top of the lovely Regency stairwell, we inherited an unappealing, sloping, wired-glass skylight. This was renewed and the contractors took great pride in creating a new and contemporary oval skylight to crown off the stairwell, one more in keeping with the house's Regency origins when such oval openings were common. Framing for the skylight was made in metal masked with wood beading.



All the draughty 1980s sash windows were replaced with bespoke double-glazed ones by Walkers' joiners, copying the originals (here in the second floor bathroom).

The new oval skylight above the stairwell under construction.

How to furnish the building was another challenge. To furnish it as a Regency house would have felt disingenuous given the many changes the house had undergone, and at odds with the vibrancy of the site and the city. At first a modern approach was considered but this didn't seem right either. It was a matter of finding the period the house felt most comfortable with, and so the 1930s, as the heyday of the railways, has been chosen as the guiding theme. The furniture is generally honest Arts & Crafts pieces of the early 20th century, lifted with a touch of the Jazz Age and the glamour and excitement of rail travel at the time. Given its long history, in a sense Time plays with itself at the Station Agent's House, both in its own fabric and its wider setting, and Landmark has been happy to embrace that spirit.

Visitors on a Scaffold Tour for Heritage Open Days in September 2023 getting a tour of progress on repairs to the roof and the first floor room, from Adrian Walker of Walker Construction.

Engagement activities

The Station Agent's House marks the first Landmark project where we have included public activities into a project budget that had no external funding. Without any external funding conditions to offer a programme of public activities, we previously have focused our efforts on the physical restoration of the building. This project, funded through private donations and unrestricted Landmark funds, was the first time we dedicated resource to reaching out to our local communities. Landmark recognises the public benefit and value of our restoration work for sharing learning opportunities and unique experiences, and we are committed to increasing our capacity to do this in future projects.

In September 2023, as part of the annual festival, Heritage Open Days, we welcomed visitors to the active building site to don hard hats and high-vis jackets, and join Marcus and Adrian from Walker's Conservation on a tour of the building and scaffold. After meeting in the first-class ticket hall next door for a chance to view the plans and images of the site, visitors were treated to a sneak peek at progress inside: reflooring, and the adjustments being made to the layout of the floor plan. Outside, on the scaffold, visitors saw the work in progress on the gargantuan task of repointing the exterior brickwork. For those willing to brave the height and the ladders, the view of the recently re-slated and leaded roof was an angle of the building that very few will get to experience.

The Science & Industry Museum next door were generous in offering us a venue for a family-focused activity during February half term 2024. Landmark took over their Conversation Space for objects handling and a creative activity inviting visitors to try their hand at some (creative!) architectural drawing. Objects included a roof hip tile, a cast iron gutter joint, slate roof tiles, and the item which many people couldn't wait to touch, the 100% sheep wool insulation ('rougher than expected, but still fluffy!')

Visitors enjoying the activities in the Conversation Space at the Science & Industry Museum in February half term.

Landmark Engagement Officer Hannah Thompson encourages some young visitors to get hands on with examples of building materials from the building.

Other visitors were invited to draw their own ideas for how the floor plan and front elevation of the Station Agent's House could have been adapted. With roof gardens, solar panels, and games rooms suggested, maybe we should have asked for their input earlier in the process.

As part of the opening celebration events we welcomed the public to visit the building for an Open Day, with history sheets and children's activity packs available. We also hosted a 'Landmark Lates' event – the first of its kind for Landmark – as a preview event one evening. This event welcomed visitors to explore the newly opened building and talk to poets from Poetry Takeaway. After a short conversation with a site-relevant focus on journeys, travel and railways, the poets wrote short personalised poems, presented in takeaway format for visitors, a remarkable souvenir of their visit to the Station Agent's House.

We are grateful to all our partners who have made these Activities possible throughout the project: The Science & Industry Museum for generously sharing their venue with us and inviting us to share our project with their visitors; Adrian & Marcus Walker from Walker Conservation Ltd for leading the Scaffold Tours with excellent expertise and humour, and the poets and team from Poetry Takeaway for sharing their inspirational creativity with our visitors.