

LONDON UNITED TRAMWAYS

Geoffrey Wilson

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THE CITY

THE CITY

LONDON UNITED TRAMWAYS

HISTORY OF THE CITY

LONDON UNITED TRAMWAYS

A history, 1894–1933

GEOFFREY WILSON

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TRAMWAYS

A History – 1894 to 1933



Geoffrey Wilson

ILLUSTRATED

LONDON

George Allen & Unwin Ltd

RUSKIN HOUSE MUSEUM STREET

FIRST PUBLISHED IN 1971

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LUET, LUET, let me see.
Of course, 'Let there be light'.

ANON

We honour our chairman,
we serve the public and we
trust in God.

JAMES CLIFTON ROBINSON

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GEOFFREY WILSON

October 1969

*Merton Park,
London, SW 19.*

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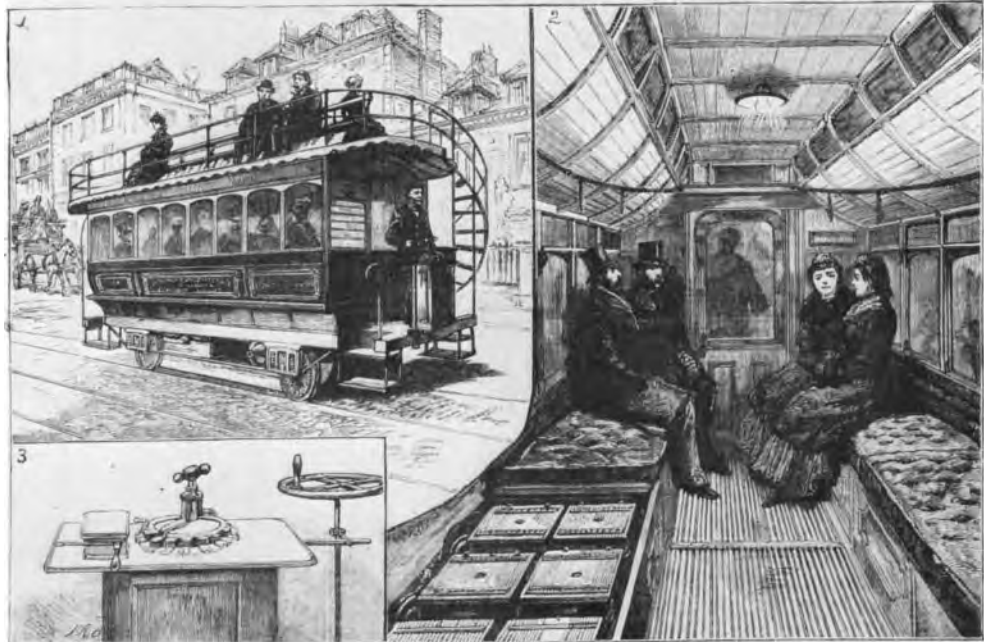
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Top: West Metropolitan Tramways one-horse single-deck car on Shepherds Bush–Young’s Corner Service. (O. J. Morris Collection). Centre: Reckenzaun’s battery car tried out at Kew Bridge in 1883. (London Transport). Bottom: Acton High Street in LUT horse-car days. (Courtesy Acton Library)



Left: LUT pair-horse car on Hammersmith–Kew Bridge service. Note the ‘Bristol’ style of the number on the dash. *Right:* Bedecked for Queen Victoria’s Jubilee in 1897 is this LUT pair-horse car outside the new Acton depot.



The Kew Green terminus of the Kew–Richmond horse tramway. (*Courtesy Richmond Library*)



Kew–Richmond horse car outside Richmond depot, possibly on its final run in 1912.

Prologue



‘Will you walk or have you time to take a tram?’ So ran a local joke in the West London of the early 1890s. The butt was the ramshackle West Metropolitan Tramways, a system which after a few years of operation had failed to make a financial success of running its four horse-car routes.

The West Metropolitan had started off in good style in 1881, taking over a Shepherds Bush–Acton horse-car line from an earlier operator and quickly adding new routes, one along Goldhawk Road to Chiswick, another from Chiswick to Kew Bridge, yet another south of the river, from Kew Green to Richmond, and finally a link between Hammersmith and Chiswick.

It had a goodly heritage. The routes, along main roads, including two of the main western highways, had a sound traffic potential. Competition from horse buses and often roundabout and slow steam-worked railways was hardly vigorous, and the districts traversed were growing rapidly.

Its constructional burst, subsequent fruitless attempts to reduce operating costs by finding a workable alternative to horse traction, and a series of ambitious projects to extend both into central London and to the west seemed to sap any energy that the management may once have possessed. By 1893 when its long-suffering debenture holders successfully appointed a receiver, the only hope seemed to lie in selling the whole concern for as good a scrap value as could be obtained – or in finding a saviour.

Nucleus of the West Metropolitan, the Shepherds Bush–Acton tramway, opened in two sections in 1874 and 1878, was one of the first permanent tramways to be laid in London, where tramway construction was lagging behind that of the provinces. London might have led the way in Britain in 1857 if the newly-formed London General Omnibus Company – founded two years earlier under French auspices – had been successful in promoting a tramway between Notting Hill and the Bank by way of Marylebone and the City Road, with a branch from Kings Cross to Fleet Street.

Street tramways were an American invention which sprang from the circumstance that some early American railways were laid down main streets of towns. It was a logical step to lay a line for local use only. The

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first authenticated street railway began in Manhattan in 1832 as a downtown prolongation of a proposed steam railway, the New York and Harlem.

Paris was the first city in Europe to adopt tramways. Alphonse Loubat opened a demonstration line in 1853 and began public service in 1855, hence the Paris-based 'General' company's initial interest in running both trams and buses in London.

In 1859 John Curtis began operating a 'rail-bus' service in Liverpool, running his vehicles over the Mersey dock lines, but it was across the Mersey, in Birkenhead, that Britain's first true tramway was opened, with great éclat, on August 30, 1860.

It ran between Woodside and Birkenhead Park and it was the first British venture of eccentric American George Francis Train, of whom more will be said later. Train had tried without success to gain Parliamentary powers for tramways in this country. He then patented his special rail system and began to build lines by agreement with local authorities.

Although the L.G.O.C. had proposed to use a flush-type rail, so as not to inconvenience other road users, Train adopted an L-shaped step rail with the top of the vertical part laid slightly proud of the road surface. His method did not recommend itself to cabmen, carriage drivers and carters and his flamboyant manner cannot have endeared him to local bigwigs.

The line, though relaid with grooved rails, was short-lived. But it made an intense impression on a Birkenhead youngster who was destined to make his mark on the urban transport scene.

Train laid step-rail lines in West Derby (Liverpool) and London in 1861. They were equally ephemeral. So also was a line in Darlington, and only a change to grooved rail after Train had quit the British stage saved his Hanley-Burslem tramway from sharing the early demise of its fellows.

Train's first plan for London comprised a large loop line, from Finchley Road to Baker Street, Wigmore Street, Regent Street, Oxford Street, Portman Square, Gloucester Place and back. He was unlucky in that there was a railway boom at the time, so that tramway schemes failed to attract support, and was foolish in persisting in his step rail.

He had to settle in London for three short, disconnected lines, all opened in 1861. The first was along Bayswater Road, between Marble Arch and Porchester Terrace, and was opened on March 23, 1861, in the

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presence of a great crowd of celebrities, including Charles Dickens and Douglas Jerrold. It was followed on April 15th by a line along Victoria Street between Victoria Station and Westminster Abbey, and on August 15th by one from the south side of Westminster Bridge to Kennington Gate.

Train's lines were laid on the understanding that they were to be removed at short notice if authority required. It soon did. The Bayswater line closed in the September, the Victoria Street line in March 1862 and the Kennington line in June 1862.

The first two routes were never again to see tramways but the third would later become part of the South London trunk tramway system.

Sustained tramway development in this country should perhaps be reckoned from the inauguration of the Liverpool Tramway Company's service in November 1869. The company was the first tramway undertaking to gain an Act of Parliament.

The Tramways Act of 1870 began as a sincere attempt by the Board of Trade to regularize the procedure for promoting and laying down tramways. Had it passed in the form intended, urban transport might have developed differently. But the Bill had a rough passage through Parliament and it emerged laden with irksome provisions. Board of Trade certificates which had needed no Parliamentary sanction were rejected in favour of Provisional Orders, which required such approval. Frontagers, that is, owners and occupiers of property along the proposed route, gained the right to object in general, and of veto where the line was to run within 9 feet 6 inches of the kerb for a length of 30 feet and a third of their number opposed. The sanction of street authorities was still necessary, but – a truly British compromise – promoters gained the right to overcome local authority vetoes if their line was to run through several districts and was supported by authorities for at least two-thirds of its length!

Even so, the benevolence of the Metropolitan Board of Works augured well for the prospects of tramway promoters in London and several tramway entrepreneurs hoped to extend their activities to central London, not merely the suburbs. But such powerful opposition was mustered that all projects for tramways in the City and West End were postponed for consideration by a joint select committee of both Houses.

The effect of the findings of this committee – which also recommended that the procedure for Private Bills should be brought into line with that for Provisional Orders – was effectively to seal off central London from

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tramways, with the result that, for good or ill, London was never to gain a truly comprehensive tram network. The psychological effects were as severe as the physical. In London, tramways came to be regarded as all very well for the suburbs, particularly the less fashionable, but not the thing for the City or West End.

The first permanent tramways in the inner suburbs all opened in 1870: the Brixton–Kennington section of the Metropolitan Street Tramways (May 2nd); the Whitechapel–Bow section of the North Metropolitan Tramways (May 9th); and the New Cross–Blackheath Hill section of the Pimlico, Peckham and Greenwich Tramways (December 13th).

Although Train's Bayswater venture had been a bad choice of route, as it served only a well-to-do district with a carriage-owning population, there were good possibilities farther west, based on the traffic centre of Shepherds Bush, which was served by the Metropolitan and West London Railways.

On May 12, 1870 the Southall Ealing & Shepherds Bush Tram-Railway (later Tramway) Company was incorporated to build and work a line from Uxbridge Road Station (Shepherds Bush) along the Uxbridge Road to Acton, Ealing, Hanwell and the 'Red Lion' at Norwood (Southall). In 1872, before construction had begun, its engineer, George Billinton, tried unsuccessfully to promote an extension from Southall to Uxbridge.

In the same year Richmond Vestry considered the construction of a tramway along Kew Road. It was the start of an equivocal attitude to tramways by the Richmond authority which was to last for forty years.

On December 16, 1873, Reid Brothers, of City Road, began work on the first section of the SE & SB, between Uxbridge Road Station and the 'Princess Victoria' (Askew Crescent), Acton Vale, a distance of 1 mile 10 chains. It was opened on June 1, 1874. The cost of £5,500 a mile was said to be lower than that of any other metropolitan tramway yet built. Even so, the line was not a financial success and it ceased working on February 20, 1875, when revenue was stated to be £40 a week and working costs £27.

Reid Brothers took control and the Board of Trade sanctioned re-opening on September 21st. When the Board of Trade heard the owners' application in July to extend through Acton, it was said that 1,000 passengers were using the tramway daily and that some £19,000 of the authorized capital of £25,000 had been spent.

The owners gained a Provisional Order in 1876 to extend 1 mile 5

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chains to a point 25 yards west of 'Priory Road' (Acton Lane). The extension was opened on February 18, 1878.

Meanwhile there had been abortive attempts, in 1874 and 1875, to build other lines in connection from Shepherds Bush to both Notting Hill and Kensington.

Although the LGOC had long since given up any aspirations to operate both trams and buses, it was quite willing to supply horses to tramway operators. Accordingly from February 18, 1878, it horsed the Acton tramway by agreement with Charles Courtney Cramp, to whom the line had been leased for £600 a year.

By this time there was agitation for tramways in the Isleworth district. In an editorial in its December 14, 1878, issue, the *Richmond and Twickenham Times* said: '. . . it is a notoriously inconvenient fact that there are few districts so badly off for the means of locomotion as that lying between the Middlesex side of Richmond Bridge and Brentford. . . . Compared with the antique, doleful and jolting "bus", the tram car is almost a palace on wheels and in point of comfort it is far beyond the average of South-Western Ry. carriages. . . .' The knowledge that a road was used by trams generally put other drivers on their guard, 'and thus in actual practice it has been found that on thoroughfares where there is this supposed need for special caution, and therefore its exercise, accidents least frequently occur'.

The engineer to the Brentford, Isleworth & Twickenham Tramways, then promoting a Bill, took up the newspaper's theme, saying that experience in London showed that even in narrow streets tramways aided traffic regulation.

The BI & T Bill was for 5 miles 39 chains of line between Kew Bridge, Brentford, Isleworth, St Margarets and the Middlesex side of Richmond Bridge. Frontagers in both Brentford and Isleworth were in favour but the wealthier residents of 'East Twickenham' were indignant. When the Bill came before the Commons the solicitor for Lady Chichester said that it would be 'intolerable to have the tagrag and bobtail disgorged before her ladyship's lodge'.

The scheme was shorn of its St Margarets section and passed as a line between Brentford Bridge and North Street, Isleworth.

In 1878 there were proposals for tramways between Hammersmith Broadway and both Kew Bridge and Barnes. In 1879 the Brentford & Isleworth company sought to extend from its authorized line at Busch Corner, Isleworth, to both Hounslow Heath and Twickenham and lay a

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branch from Hounslow ('Bell') for some distance along the Bath Road towards Cranford.

New vigour seemed about to be injected into West London tramway development, sadly languishing, by the incorporation on August 12, 1881, of the West Metropolitan Tramways Co. Ltd, with a capital of £100,000, to acquire the Shepherds Bush-Acton line and build extensions.

The new concern began energetically. In March 1882 it took over the Acton line and by Act of August 10, 1882, was reincorporated as a statutory company under the same title.

Powers were gained at the same time for lines from Hammersmith Broadway through Turnham Green to the Middlesex side of Kew Bridge; from the Surrey side of that bridge, alongside Kew Gardens, to Richmond (Lower Mortlake Road); and from Shepherds Bush along Goldhawk Road to join the Hammersmith-Kew Bridge line at Young's Corner. (Young was a greengrocer whose shop stood on the corner of King Street and Goldhawk Road.)

Kew Bridge, predecessor of the present structure, was considered too narrow for a tramway, a fact which was profoundly to affect the course of tramway history in the area.

The routes were opened as follows:

Shepherds Bush-Young's Corner.	March 18, 1882
Youngs Corner-Kew Bridge ('Star and Garter')	December 16, 1882
Kew Bridge (south side)-Richmond (Lower Mortlake Road)	April 17, 1883
Hammersmith Broadway-Young's Corner	July 14, 1883

The Kew Bridge (north side) section was soon the scene of an interesting experiment in battery traction. Anthony Reckenzaun, an Austrian settled in England, tried out a converted horse car in which fifty cells had been placed under the seats in the lower saloon to supply power to a motor driving one of the two axles. Electric lamps and bells were also installed.

It was said that the batteries could operate the car, with a full load of forty-six passengers, for seven hours. The top speed achieved was 6 m.p.h.

Although the experiment was claimed as a success, it apparently lasted only a day, March 10, 1883. According to *The Graphic* the car had

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to be helped up a rise by horses after a connecting band had failed.

Throughout the 1880s there were abortive efforts to promote new tramways in West London. Some were by the West Metropolitan, which in 1884, for example, sought powers for 8 miles 13 chains of double track and 6 miles 23 chains of single track in Acton, Hammersmith and Southall. In 1885 the Brentford & District Tramways promoted a Bill to incorporate and build tramways from Kew Bridge to Isleworth and Twickenham, and to Hounslow Barracks, totalling about eight miles of line.

The B & I company's track in Brentford and Isleworth had apparently become disused by this time. The Hounslow Local Board resolved in 1889 to lift it between Brentford Bridge and Busch Corner and between Isleworth Union and Mill Plat. At the same time the West Metropolitan was examining the possibilities of extension into Brentford.

There was a scheme by the Acton & Hammersmith Tramways in 1887 to incorporate a company to build lines between Askew Arms and Hammersmith via Askew and Paddenswick roads, and from Hammersmith along Hammersmith Road as far as Avonmore Road, West Kensington, 2 miles 39 chains in all.

In view of later developments it was unfortunate that the West Metropolitan could not follow up quite a Parliamentary triumph in 1889, when, optimistically, it was authorized to extend along the Uxbridge Road to Ealing and Hanwell; from Shepherds Bush via Morland, Latimer, Lancaster, Cornwall, Westbourne Park and Porchester roads to Harrow Road; from Askew Arms to Glenthorne Road, Hammersmith; and lay new track between Uxbridge Road Station and Acton Vale.

The new lines, totalling 5 miles 67 chains of double and 5 miles 24 chains of single line, were to be worked by cable or other system. The company also gained power to raise additional capital of £187,500, though two years before it had tried to get its capital reduced.

This ambitious programme seems almost like bravado when the company was struggling hard enough to keep its existing system going. It can be explained only by the parallel of the Metropolitan and Metropolitan District Railways and their thrust ever deeper into the suburbs in order to bring fresh traffic to the expensive Inner Circle.

Batteries had not provided the answer to the quest for mechanical traction and, like other tramways at this time which had ruled out steam haulage, the West Metropolitan began to seek some form of propulsion in which the power was transmitted from a central source.

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It is necessary here to digress briefly to consider what progress had been made in applying electricity from such a source. On May 16, 1881, Werner von Siemens – who had shown a small electric locomotive at the Berlin Exhibition of 1879 – began public service on a 1½-mile line in Berlin which used the running rails as conductors. The obvious disadvantages soon led to the provision of a third rail, as adopted by Britain's first electric lines, the Giant's Causeway Portrush & Bush Valley Railway & Tramway and Magnus Volk's railway on Brighton beach – both opened in 1883 – and the Bessbrook & Newry of 1885.

But a third rail, unless protected in some way, was out of the question for a street railway. Both in Germany and America there were experiments with a trolley, a small collector running on top of an overhead wire and flexibly connected to the car. The American ex-naval lieutenant Frank J. Sprague perfected the under-running trolley arm and wheel method. His system opened at Richmond, Virginia, on February 2, 1888, was an immediate success and heralded the remarkable spread of electric tramways during the next twenty years.

In more conservative Britain, aesthetic and other reasons seemed at first likely to preclude any general adoption of overhead trolley tramways. On September 29, 1885 a conduit electric tramway, designed by Michael Holroyd Smith, was opened along the seafront at Blackpool, ancestor of Britain's last remaining urban tramway today. The slot system for cable traction had already been perfected in America and had lately been applied in London on Highgate Hill. But the vestries in the West Metropolitan's area, as well as the Metropolitan Board of Works, objected at that time to a slot in the road for electric traction.

A way out seemed to be offered by the Lineff closed-conduit system, with which the West Metropolitan conducted trials between 1888 and 1890, using a 200-yard section of specially-equipped track on the west side of Chiswick Depot.

Between the running rails were laid 3-foot sections of ordinary rail whose top was flush with the road surface. Below this rail but not in contact with it was a strip of flexible hoop iron laid on an electrical conductor. When a car came over a given section of track, a powerful magnet under the car lifted up a 3-foot rail section and allowed the motors to be energized. When the car passed the rail dropped back to its original position, the process being repeated all along the line.

Although high hopes were entertained of this device – the West Metropolitan hoped to reduce working costs by 50 per cent by using it –

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the Lineff system joined the great ranks of highly ingenious but over-complex systems that were never put into practice. Even to function moderately well, it would certainly have required meticulous laying and maintenance.

An abortive Bill of 1890 was that of the West London Tramways Company, which sought incorporation and powers to build lines from Acton to Hanwell and Hammersmith, and in Kensington, Paddington and Fulham. In the following Session the promoters asked for power to reincorporate the company and build tramways specifically in Uxbridge Road, Askew Road, Paddenswick Road, The Grove, Hammersmith Road, Shepherds Bush Road, Richmond Road (Shepherds Bush), Norland Road, Lancaster Road and Tavistock Road, and to have running powers over part of the West Metropolitan.

In 1891 the West Metropolitan hopefully informed the public in the *West London Advertiser* of its plans for complete relaying and electrification. It also proposed to revive its 1889 powers to extend from Acton to Hanwell and from Hammersmith to Addison Road.

Speaking at the company meeting on March 1, 1892, E. H. Bayley, the chairman, expressed confidence in the future, despite 'one of the most trying years experienced', and looked forward to the adoption of electric traction at no distant date. The company had spent £5,742 on providing for double track between Hammersmith and Kew Bridge – a work completed in 1893 – but the vestries concerned agreed to maintain the track at their cost for the first year.

The company was nothing if not a trier. Although by 1893 it was pretty decrepit, it asked for powers not only to build new lines and substitute new for existing lines but also to use steam, electric or other mechanical power, divide the undertaking into two or more parts, authorize Hammersmith Vestry to lend £20,000 towards the cost of building certain lines, raise fresh capital and again extend the time for authorized lines.

It was a bold gasp but a dying one. On June 13, 1894, the receiver whom the debenture holders had appointed the year before offered the undertaking for sale as a going concern. The assets were listed as:

Chiswick Depot (just off Chiswick High Road, between the present Merton and Ennismore Avenues), with stabling for 140–170 horses, a 3-storey granary, fodder stores, sheds for 20 cars, seven cottages arranged as 14 dwellings for workmen, a yard and an exercise ground
Shepherds Bush Depot (between Shepherds Bush Road and Wells

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Road) with stabling for 61 horses and a yard for seven pair-horse cars
Richmond Depot (Kew Road) with stabling for 30 horses and a covered yard for 6 cars
34 pair-horse and single-horse cars
15 new pair-horse cars, being supplied by G. F. Milnes, Birkenhead

The sum of £750,000 had been spent on the system and a revenue of £25,000 derived.

The condition of the West Metropolitan, or at least of the Acton line, which seems to have been the worst part, may be judged from an article in the September 1894 issue of *Railway World*. 'The local authorities have maintained with some show of reason that when their officials returned from an early morning stroll, laden with debris of the permanent way, in the shape of pieces of rail 3 or 4 feet long, they were justified in holding that the tramways in their streets were unquestionably a nuisance and, as such, should be removed.'

The writer said that to compare the West Metropolitan to a modern tramway was like comparing a London Chatham & Dover third class coach to the comparable accommodation of the Scotch Express. He went on: 'Only a personal inspection of the museum of antiquities now in the yard of the Chiswick depot can give an adequate impression of the extraordinary condition to which both rolling stock and permanent way had been allowed to fall. Some of the cars would serve admirably as a 'pre-historic peep', while the rail sections, ranging from the stringer and Kincaid to the more recent girder pattern, deserve the study of the Tramways Institute.'

It is not surprising that there was no mad rush to secure such a prize. In fact no bids were made at the auction on June 13, 1894. But behind the scenes, in Bristol, there was great activity. On August 6, August Krauss, tramway contractor of Bristol and director of the City of York Tramways, bought the West Metropolitan assets for £30,000 through the Court of Chancery. The *Railway World* of August 1894 understood that Krauss would spend £25,000 on doubling in Acton and Hammersmith and would put new cars on the Acton and Kew Road routes. The track, it reported, had fallen into a dangerous state, but because of the purchase an inquiry into the condition of the Acton line had been suspended.

Krauss bought the West Metropolitan on behalf of a new company, the London United Tramways Co. Ltd, of which he was a signatory. The company had been registered in Bristol, with an address at Clare

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Street House, and had been incorporated on July 19, with commendable speed in view of its aim. Its capital was £25,000 of ordinary, £25,000 of preference and £32,000 of debenture shares.

George and Samuel White, secretary and assistant secretary of the Bristol Tramways Company, were the backers and the Imperial Tramways Company – of which more anon – had a large holding. The other signatories were:

William Butler, J.P., Chairman of Bristol Tramways Company
Joseph Kincaid, M.Inst.C.E., Chairman of City of York Tramways Company
H. G. Gardner, Deputy Chairman of City of Gloucester Tramways Company
Alderman Bartlett, Chairman, Bartlett & Son Ltd
Hugh G. Doggett, solicitor, Bristol Tramways Company, and Coroner for Bristol
James Clifton Robinson, A.Inst.C.E., Managing Director, Imperial Tramways Company.

Within two years the purchasers would transform the old West Met. into one of the best-built, best-equipped and best-managed horse tramways in the kingdom, and pay an 8 per cent dividend into the bargain. They would amply justify the shrewd assessment of potentialities made by Robinson after he had inspected what other men might have dismissed as a hopelessly unprofitable field for speculation.

The new proprietors soon showed their colours. They announced that they were ready to find all the money needed for rejuvenation. They would scrap all cars beyond repair and modernize those in reasonable condition. New 46-seater cars designed by Robinson would be ordered from Milnes and a five-minute headway service would be provided on some sections. (The modernized stock included the Lineff trial car shorn of its gear and renovated for service on the Kew Road route.)

The London United – the name suggested ambitions beyond inner West London – gained its first Act on July 6, 1895. It confirmed Provisional Orders for new lines, mostly double track, in substitution for parts of existing lines in Hammersmith, a new line in the Grove, Hammersmith, and an extension (3 furlongs 2.6 chains of single and 1 furlong 5.58 chains of double track) from the Acton terminus at Birkbeck Road to Acton Hill (“The White Hart”), and a new depot at Acton Hill in the

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angle of Uxbridge Road and Gunnersbury Lane to replace that at Shepherds Bush.

No time was lost in getting to work, The Shepherds Bush-Acton line was doubled throughout. New tracks were laid with hardwood between the metals and granite paving for 18 inches outside the outer rails. The West Metropolitan's 1887 Order as to motive power was repealed to allow cars to be moved by animal, electric or any mechanical power other than steam.

Robinson, as Managing Director of the LUT, declared: 'Later on, when the question of conversion to mechanical traction is taken up, as it must be, we shall require to spend more than the outlay at present contemplated but we shall be only too pleased to do so if the local authorities desire it.' He added that the signatories to the company's articles of association really were the owners, all men with long practical experience in tramway work.

Drivers, conductors and inspectors were put into liveries of uniform type and more men were engaged. New horses were brought and new cars, designed by Robinson, were ordered or built by the LUT at Chiswick, where the depot was enlarged.

Chapter I



Enter Robinson

Two significant facts about the new-formed London United Tramways Company were that it was Bristol-born and that James Clifton Robinson begat it. The facts are interwoven. To understand how we must consider Robinson's already remarkable career.

By 1894 James Clifton Robinson, at the age of forty-six, had established a formidable reputation in the tramway world. He thought big and by a combination of charm and pertinacity, combined with a masterly grasp of potentialities, he gained valuable backing.

He was born on December 31, 1848 – a future tramway Stephenson born in the year of George Stephenson's death – son of William Robinson 'of no profession', of Birkenhead. Even his birthplace was auspicious. As we have seen, it was in Birkenhead, on August 30, 1860, that Train laid down Britain's first street tramway.

Robinson, a boy of twelve, was fascinated by Train's tramcar. How much formal education he had received we do not know. But he was a bright lad and it was the age of self-help. He did not rest until he had become Train's office boy.

In 1866 Robinson went with Train to the United States, where, in New York, he gained valuable experience in building, operating and managing street railways. He was back in England in 1871 as assistant to the American firm of Fisher & Parrish, railway and tramway contractors, on the construction of tramways in London, Liverpool and Dublin.

He was appointed general manager and superintendent of works of the newly-built Cork tramways in 1873. The six double-deck cars bore his name on the side panels. He was on the way up. One day, on the steps of the Imperial Hotel, Cork, he was introduced to Mary Edith Martin, daughter of Richard Martin of Blackrock, Co. Cork. They were married in 1874.

Robinson's wife was a beautiful blonde, who kept her looks almost until she died. As her husband was a fine-looking man they must have

London United Tramways

made a handsome pair. She was imperious, used to having her way, had excellent taste and proved an admirable hostess.

Robinson's first English appointment came in 1875, as first general manager of the Bristol Tramways Company, another new company, formed by Joseph Kincaid.

He made a great success of things in Bristol, where he first became associated with George (later Sir George) White, whose success story almost matched his own. He and White made a great team. It was the triumph of the Bristol tramways, coupled with the financial acumen of George White and his brother Samuel, and their talents and Robinson's, which would ensure remarkable expansion later on.

The Robinson's only son, Clifton, was born in Bristol in 1880.

In 1882 Robinson became general manager and secretary of the Edinburgh Street Tramways Company. He reorganized and extended the system and introduced Sir James Gowans's continuous steel girder rail.

He began to ponder the possibilities of mechanical traction on tramways. Possibly as a result of seeing the inauguration of the Giant's Causeway Portrush & Bush Valley line in 1883 – he indicated the possibilities of electricity as a motive power for tramways in a paper on cable traction which he gave to the Royal Scottish Society of Arts in that year.

Robinson's paper attracted such notice that he was called on to organize and operate the Highgate Hill cable line, opened in May 1884 by the Steep Grade Tramway & Works Co. Ltd and the first cable tramway in Europe. Between 1884 and 1886 he managed the parent concern, the Hallidie Patent Cable Tramways Corporation Ltd (A. S. Hallidie had introduced his cable system to San Francisco in 1873. His associate E. S. Eppelsheimer brought it to Europe).

Possibly through Robinson connections, the Edinburgh Northern Tramways, a company formed in 1884, built for cable traction that year and in 1887 two lines which the Edinburgh Street Tramways Company had not constructed. It made an agreement with the Hallidie Corporation and opened the first line in 1888.

While managing the corporation Robinson appeared before the Parliamentary committees considering the City of London & Southwark Subway Bill, put forward in 1884.

The Highgate Hill line in its original form was no great success and the corporation went into liquidation in 1888. But by then Robinson had crossed the Atlantic once more.