Supplement to -

Britain's Lost Trolleybus Systems

Plans and Proposals, 1900 to the present day

Roland Box

TROLLEYBOOKS

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Credits

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Front cover: from top left,
The Trackless Cars demonstrator, seen here in Leeds, is historically important in being Britain's first trolleybus to have an enclosed staircase. Blackburn Aeroplane Co., *Geoff Lumb Collection*

A timeless scene at the Stow Hill terminus of Newport's tram system, that was destined never to be served by trolleybuses. *Commercial Postcard*

Recent research has found that the Trackless Trolley demonstration along the Woolwich to Eltham tramway brought railless operation to the streets of London some months earlier than the previously-known demonstration at West Ham. *Ashley Bruce*

Cable trams were still operating in Edinburgh when the first railless proposals emerged in 1911. *Alan Brotchie Collection*

This demonstrator trolleybus was tested along a private roadway at Doncaster in the 1980s at a time when a UK trolleybus revival seemed possible. *Bob Tebb*

Title page:
Kingston upon Hull 9 as it may have appeared had the order for twelve Guy BTX trolleybuses been carried out. As it was, the order was fulfilled by Guy FCX petrol buses, following public rejection of the trolleybus scheme (see page 134). *Ashley Bruce*

Rear cover:
If plans had materialised Bolton would have been another town where trolleybuses in different liveries would have operated side by side, here illustrated by a corporation motorbus and a South Lancashire Transport trolleybus. *Jack Batty, Alan Murray Collection*

Introduction

Since the publication of *Britain's Lost Trolleybus Systems* at the end of 2018 a number of readers have kindly provided further details about the systems described and even additional system proposals that I would never have otherwise discovered and I thank them for doing so.

Earlier in 2018 The Bus Archive had come into being, the culmination of detailed discussions between The Kithead Trust and the Omnibus Society about combining their collections. It has one of the largest and widest collections of material about the bus industry in the UK, held at three research centres where they can be examined by appointment. Transport historian Geoff Lumb has donated his extensive collection of documents and photographs to the Archive and reference to it has provided further surprises and additional information about suggested railless schemes.

References here to the *Light Railway & Tramway Journal* have been extracted from the Geoff Lumb Collection at The Bus Archive. The assistance of Philip Kirk (Director and Archivist) and Jo Jagielski in facilitating this is gratefully acknowledged. I also wish to thank Roger Smith for producing the additional maps showing the Edinburgh proposals and all of the individually recorded contributors.

I shall be pleased to hear from anyone with further information about these and other unfulfilled proposals for railless and trolleybus systems. Twenty suggestions and proposals for systems have come to light since the book was published in 2018 and there could still be others to be found too. I can be contacted at roseland.box@hotmail.co.uk.

Proposed systems not included in the book are shown as **Town** and the page numbers shown here for these are therefore indicative only.

Title Page

Page 1. The Guy FCX motorbuses at **Kingston upon Hull** were not delivered in the blue livery depicted on the title page of the book as they arrived sometime in 1930 whilst E S Rayner was still in charge and therefore would have carried the tramway maroon and white colours shown on the title page of this Supplement. The blue livery was introduced by D P Morrison who replaced Rayner during 1931. The first motorbuses to wear that livery were AEC Regals and Regents delivered early in 1932. The Guys received the blue livery later. (Malcolm Wells)

This image was created digitally by Ashley Bruce from the picture on page 134 and blue, rather than maroon, was chosen as it was the colour used during the trolleybus era. However, the image has since been revised to maroon, the colour used on the delivered motorbuses.

Chapter 2 - The Legislative Process

Page 11. Ben England's comments echoed those of others, including Colonel James Baldwin-Webb MP who, in opening a debate in the House of Commons on schemes for the unemployed on 15 February 1933, referred to the Salter Report of 1932, which directed government policy on transport for the following decades: "The effect of the Salter Report has been very damaging to manufacturers of road service vehicles. In Birmingham we have held up the purchase of fifty electric trolley omnibuses for the last nine months because of the threatened excessive and crushing taxation on these vehicles. The final report of the Commission on Road Transport Services stated that tramways were an obsolete form of transport, and that they should ultimately disappear in the interests of other road users, and it made very strong representations for railless vehicles. If, however, the recommendations of the Salter Report become law and the tax on railless vehicles and omnibuses is to be the same, any economy in the use of railless vehicles will be wiped out, to the further discouragement of the coal-mining industry." [abridged]

The Salter Report was named after Arthur Salter, who chaired an influential conference of road and rail experts in 1932 which reported early in 1933. The report directed British government policy on transport funding for decades.

The widespread use of public road passenger vehicles and private motor cars was seen to be of great benefit but the report noted that the growing numbers of motor vehicles were causing more wear on the carriageways. It concluded that the existing system of road funding, which relied on local authorities to fund a significant portion of the road network, represented a subsidy to the road hauliers. To counter this, the report recommended that local authorities should be relieved of the burden of funding road maintenance and, instead, the motor vehicle should fully pay its way.

A licensing system for commercial heavy goods vehicles and their operators was introduced under the Road Traffic Act 1934 but the costs and conditions attached to the new licences and vehicle duty were contentious as they were based on axle weight and could be very expensive. Many municipal corporations who ran their own motorbuses as well as company motorbus operators, hauliers and others, including trade unions, protested and predicted crippling increases in fees. The new charges were blamed for driving heavier steam traction off the road in favour of the lighter lorries. (Wikipedia)

The proposed increase in the licence fee from £96 to £554 on trolleybuses prompted Birmingham Corporation to wait for the outcome of the review and only when there was no reference to trolleybuses in the 1933 Budget did it proceed with its conversion plan to replace the Coventry Road trams. (Andrew Gardner, *Omnibus 281*)

Chapter 4 - London

Page 13. It is mentioned that the railless vehicle demonstrated at **Hendon** was tested briefly at Birkenhead before delivery and the picture caption on page 99 states that this took place along Cleveland Street. It thus became the first railless vehicle to operate on a public highway in Britain. In *The History of Milnes-Voss* the late John Price states that this test was undertaken "in July 1909 with a skate" and noted that Thomas Voss had been quoted as seeing "a great future for this type of vehicle".

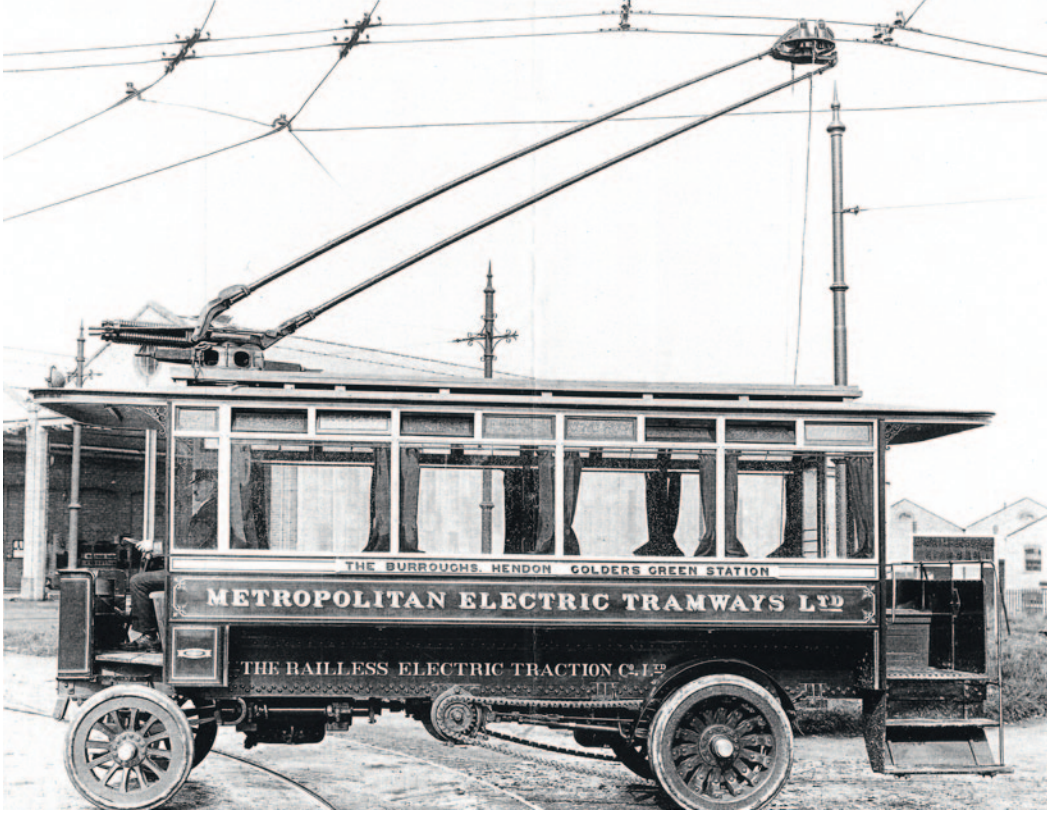
(*The History of Milnes-Voss, Modern Tramway 1968*, the late John Price, courtesy of Paul Fox)

It was customary in the horse-bus and early motorbus eras in London and elsewhere for

the route to be shown on the vehicle sides. The Hendon demonstrator was similarly adorned in anticipation that agreement might be reached with Hendon UDC for the route indicated. The fate of the vehicle is not recorded but it is likely that it was dismantled as happened to many other such demonstrator vehicles.

In November 1909, two months after the demonstration, the MET company declined an invitation to invest in the Railless company. *(London Transport Magazine*, February 1962*)*

One can wonder how many delegates attending this event realised that they were witnessing the dawn of a new mode of transport with over four thousand* such vehicles in service forty years later or indeed that fifty years later the land behind the depot would be used to scrap most of London's large trolleybus fleet as the country condemned trolleybus operation in favour of the motorbus. [* 4,086 in 1949; *Inland Transport Statistics - Great Britain 1900-1970*]



This picture has appeared in several publications, credited to various sources. However, the backstamp on an original print found at The Bus Archive shows the original copyright holder to be Wakefields Automobile Photographers of Brentford and Ealing.

Early Trolleybus History Timeline

July 1909	MET demonstration railless vehicle tested on Cleveland Street in Birkenhead.
September 1909	MET demonstration at Hendon tram depot.
June 1911	Railless systems opened in Bradford and Leeds.
February 1912	Trackless Trolley railless vehicle with twin trolleypoles demonstrated on the LCC tramway between Woolwich and Eltham using the twin overhead tram wires.
September 1912	Railless system opened in Dundee.
September 1912	Trackless Trolley railless vehicle demonstrated on Greengate Street at West Ham using specially-erected Cedes-Stoll wiring.
October 1912	Railless system opened in Rotherham.

Birkenhead thus saw both the opening of the first street tramway in Britain (in 1860) and the first railless vehicle to operate on a public highway.

Page 17. As well as **Stepney** the boroughs of Bethnal Green and Hackney also objected to the electrification with overhead wires of the 2¾ mile horse tramway from West India Docks to South Hackney. The LCC considered using petrol-electric trams to overcome the need for overhead wires but a trial between May and November 1913 on route 70 (London Bridge – Greenwich Church) with three adapted from former North Metropolitan horse cars proved unsatisfactory owing to their noise and running costs. (Tram route 70 would have become trolleybus route 570 if London Transport's tram-to-trolleybus conversion scheme had not been halted in 1940.) (John Reed, *London Tramways* and *London County Council Tramways Handbook)*

Page 23. The reference to Middlesex County Council should read Hertfordshire County Council. Hertfordshire CC was supportive of the MET's ambition for a tramway from Bushey Heath to Watford but the opposition of Stanmore residents had thwarted the proposal for an extension of the Edgware Road tramway to the Middlesex/Hertfordshire county boundary at Bushey Heath thereby making the further extension to Watford unviable. Hertfordshire CC formally withdrew its support for the proposal in 1913. (J C Gillham and *Commercial Motor*, 13 February 1913)

In May 1913 the LGOC introduced motorbus route 105 from Kilburn to Watford along the route of the railless route that had been proposed by **Watford** Urban District Council three years earlier. It was renumbered 142 in 1914 and by 1928 was operating as route 142A between Edgware Station and Watford and as 142B between Kilburn Park Station and Watford.

Page 24. In November 1911, a meeting of **Cheshunt** Urban District Council agreed that a committee should be formed to enquire into the desirability of adopting the trackless trolley system between Waltham Cross and Turnford, a distance of about three miles. This was one of many suggested applications for the new railless system around the country following the opening of those at Leeds and Bradford, most of which appear to have been given little more thought than for the erection of, say, a bandstand in the municipal park and got no further than a debate at a council meeting. *(Light Railway and Tramway Journal*, 10 November 1911)

Page 24. The Tramways (MET) Omnibus Company had its origins in the Metropolitan Tramways and Omnibus Company, which had been registered on 21 November 1894 and which was taken over by the British Electric Traction Company on 26 November 1902 when Metropolitan Electric Tramways Ltd was formed to progress the BET plans for tramways in the County of Middlesex. The motorbus company was acquired by the LGOC on 13 January 1912 but retained its separate existence and Metropolitan fleetname. By 1930 it had a fleet of 315 motorbuses.

Page 30. As mentioned on page 19, the **London County Council** expressed interest in railless operation as early as 1908. A number of representatives attended the demonstration at Hendon in September 1909 although the council's Chief Officer of Tramways and President of the Municipal Tramways Association, Aubrey Coventry Llewellyn Fell, is reported to have poured scorn on the railless concept, dismissing it in his Presidential Address to the Association as "utterly impracticable", possibly because at the time the LCC was heavily committed to the introduction of electric trams. *(London Transport Magazine*, February 1962)

Early in 1912, when the LCC was nevertheless beginning to consider applying for parliamentary powers to operate railless vehicles, a letter was received from Trackless Trolley Ltd requesting permission to demonstrate such a vehicle along the twin-wire tramway between Woolwich and Eltham. This three mile route was so equipped to avoid stray negative return currents affecting the delicate instruments at the nearby Royal Observatory and had twin (positive and negative) wires in both directions (trams running along this route were equipped with two trolleypoles).

The Trackless Trolley vehicle, fitted with an Estler (superimposed) trolleybase, made demonstration runs on 14, 19 and 21 February, and again on 27 February after it had been taken to the Central Repair Depot at Charlton, perhaps for structural, mechanical or electrical attention or inspection.

The chassis was built in Austria by Daimler and the body in London by Bayleys Coachworks at Southwark. This demonstration was not reported in the technical journals of the day and no photographs are known to exist. The vehicle did, however, have its moment of fame at the end of September that year when, fitted with a Cedes-Stoll current collector, it was demonstrated to the Municipal Tramways Association at West Ham (pictured on page 58) and subsequently operated on the Keighley system until 1924.
(Minutes of the LCC Tramway Management and Construction Sub-committee, 6 February 1912; also Ashley Bruce, *Lombard Gerin and Inventing the Trolleybus;* Keith Farrow and Chris Holland)

Since 2019 a replica of this vehicle has made demonstration runs at the Trolleybus Museum at Sandtoft under battery power. A short length of Cedes-Stoll wiring has been erected to which it can be connected by a flexible cable for demonstration purposes. It is the intention in due course to erect a separate building on the Burntwood site which will house the replica and an exhibition, to be called "The Birth of the Trolleybus". The line will connect that building with the area at the south of the site where the children's playground is currently located. As it replicates the first railless vehicle to operate on a public highway in London it has an important place in the history of trolleybus operation in the capital as well as the UK.

On 19 March 1912 the LCC authorised certain experiments to be carried out and drawings to be made, at a cost of up to £200, in connection with the evidence that would be needed to support the Bill seeking trolleybus powers which the council was proposing to deposit in the 1913 session of parliament. The Trackless Trolley demonstrator returned

A computer-generated image of the Trackless Trolley demonstrator at the tram stop outside the birthplace of General Gordon (1833-1885), on Woolwich Common, superimposed on a colourised commercial postcard. *Ashley Bruce*

The completed Trackless Trolley vehicle at Bayleys Coachworks of Newington Causeway in Southwark, posed with an Estler trolleybase in September 1911.
John Whitehead Collection, courtesy Ashley Bruce

Visitors enjoying a ride on the replica Trackless Trolley vehicle at Sandtoft. *Alan Murray*

The replica Trackless Trolley vehicle allows passengers to experience travel as it was in 1912. *Alan Murray*

to the tramway for a further run on 24 May. This may well have been at the request of the LCC for these "certain experiments" to be undertaken. (*Light Railway and Tramway Journal*, 22 March 1912)

The Bill promoted by the LCC was the London County Council (Tramways, Trolley Vehicles, and Improvements) Bill of 1913 (the 1922 Bill had the same title).

When details of the proposed routes were submitted to the council for approval in July 1912 the Eltham to Lee Green route was not included. The submission included the route lengths of only the Hackney and Sydenham schemes:

Mare Street to Wick Lane Bridge	1 mile, 4 furlongs, 4 chains
Stanstead Road, Catford to Sydenham Station	2 miles, 0 furlongs, 5 chains
Sydenham Station to Forest Hill	1 mile, 0 furlongs, 2 chains
Sydenham Road to the County boundary	1 furlong, 0 furlongs, 8 chains.

The Eltham to Lee Green route (1¾ miles) was added to the list when the Bill was deposited in November.

Early in 1920 LCC officials visited the Tees-side system, which had opened on 8 November 1919. On reporting their findings to the Highways Committee on 18 March the councillors were not overly impressed and expressed reservations about the introduction of "a heavier class of vehicle on the London streets". Nevertheless, they raised the possibility of hiring one or two vehicles for a trial but this did not take place. At that time the nearest trolleybus system to London was at Mexborough so the cost of hiring and transporting even one vehicle may have been a deciding factor, even if the Mexborough & Swinton company was amenable to the idea. (Minutes of the LCC Highways Committee, 18 March 1920)

In 1924 the LCC, after incurring their first deficit in nearly a quarter of a century of tramway operation, again explored the possibilities of trolleybus (or motorbus) operation, perhaps also having seen the trial undertaken two years perviously by the LUT at Haydons Road, Wimbledon. (*London Transport Magazine*, June 1954)

Page 31. "Hill" has been omitted from Perry Hill, Lower Sydenham on the Sydenham map.

Page 33. It would seem that a factor in the decision of West Ham Corporation to withdraw its Bill in 1912 was the intriguing request by Wanstead Council for the corporation to do so in order that the council could obtain parliamentary powers to operate railless vehicles first. (*Light Railway and Tramway Journal*, 22 March 1912)

Page 37. The picture location is Tamworth Road, not Street.

Page 38. In 1912 the LGOC began to introduce many Summer Sunday routes into the countryside around London, one of the first being route 61 from Brixton to Whyteleafe through which the proposed **Croydon and Southern District Railless Traction** route would have passed. Between 1922 and 1929 route 43 from Muswell Hill to South Croydon was extended on Summer Sundays via Purley and Kenley to Caterham, a journey that took an incredible 161 minutes.

On 20 July 1913 the LGOC introduced Sundays-only route 116 from Stockwell to Redhill but objections from the East Surrey Traction Company forced the curtailment of the route at Merstham. The LGOC entered into an operating agreement with that company in July 1921 and by 1928 was operating route 59 to Reigate via Merstham and route 59A to Coulsdon, both from Camden Town.

Page 42. In the caption for the lower picture, the **Bexley** proposal was in 1930, not 1932.

Chapter 5 – Southern England

Page 48. Not all attempts to extend the **Folkestone, Sandgate and Hythe Tramway** to Folkestone were frustrated by Folkestone Council. One (in 1890) was supported by the council but foundered on the objection of the local landowner, Lord Radnor.

In 1906 South Eastern Railway Company entered into negotiations for the sale of the tramway to the National Electric Construction Company who proposed electrifying it and extending it to Folkestone. However, the railway company was bound by an agreement of 1892 with Lord Radnor to object to any proposal for electrification using overhead wires. The NECC therefore proposed to use the Dolter surface contact system and obtained a Light Railway Order for a 13-mile line. However, this current collection method was also not acceptable and the sale collapsed. (Brian Hart, *The Hythe and Sandgate Tramway)*

Page 55. In January 1912 Mr Adam Scott, a civil engineer of Broadway Chambers, Westminster, wrote to **Cowes** Urban District Council, enquiring if the council thought that there would be any local support for an electric tramway or a railless electric trolley system between Cowes and Ryde, a distance of about nine miles, and whether such a scheme would be looked upon favourably by the council. Whether Mr Scott made the enquiry on his own initiative or on behalf of a client is not known but the subject had been already been considered by a joint committee of various island public bodies and found to be too expensive to pursue. The UDC decided to forward the letter to the county council and there the matter ended. *(Light Railway and Tramway Journal,* 26 January 1912)

Page 58. The newspaper editorial in October 1913 was not the first time that thought had been given to railless system in **Weymouth.** The 19 February 1909 issue of *Light Railway and Tramway Journal* reported that the council's Electric Light Committee had dismissed the "trackless trolley system" as being not suitable to the requirements of the borough and commented that the committee did not appear to have visited any such system. Three years later the same publication reported of 23 February 1912 that a special committee of the council would present a report on railless traction within a few weeks.

Page 62. A joint report on railless traction was submitted to the council in 1911 by the chairman of the **Plymouth** Tramways Committee (Mr S Stevens) and the Manager (Mr C R Everson) who had visited the systems at Leeds and Bradford and strongly recommended its adoption for Laira and other parts of the borough. Mr Everson was instructed to submit an estimate of the costs and probable financial effect of establishing such a service to Laira and Crownhill. *(Light Railway and Tramway Journal,* 29 December 1911)

Page 63. The **Falmouth** map shows Bar Road as shown on the 1909 Ordnance Survey map but the *Falmouth Packet* article of 1909 mentioned in the text quotes Bar Terrace, which is the current name. This may have been the year the road was renamed. (Roger Smith)

A curious sequel is that on 9 January 1911, in an agreement made with the RET Company, Lavinia Susan Cottrill Julyan Polglase waived her entitlement to be paid a commission in cash for securing a subscription from Sir James de Hoghton for one hundred £1 shares in the company and accepted ten £1 shares. Her father was a prominent solicitor in the town and there was a growing expectation at the time that the Fal estuary could become a major sea port for trans-Atlantic liners. This

As well as attracting the interest of town councils around the country the new railless vehicles in Leeds attracted the curiosity of local children who would willingly pose for a photographer as here on the Farnley route. *Photographer unknown*

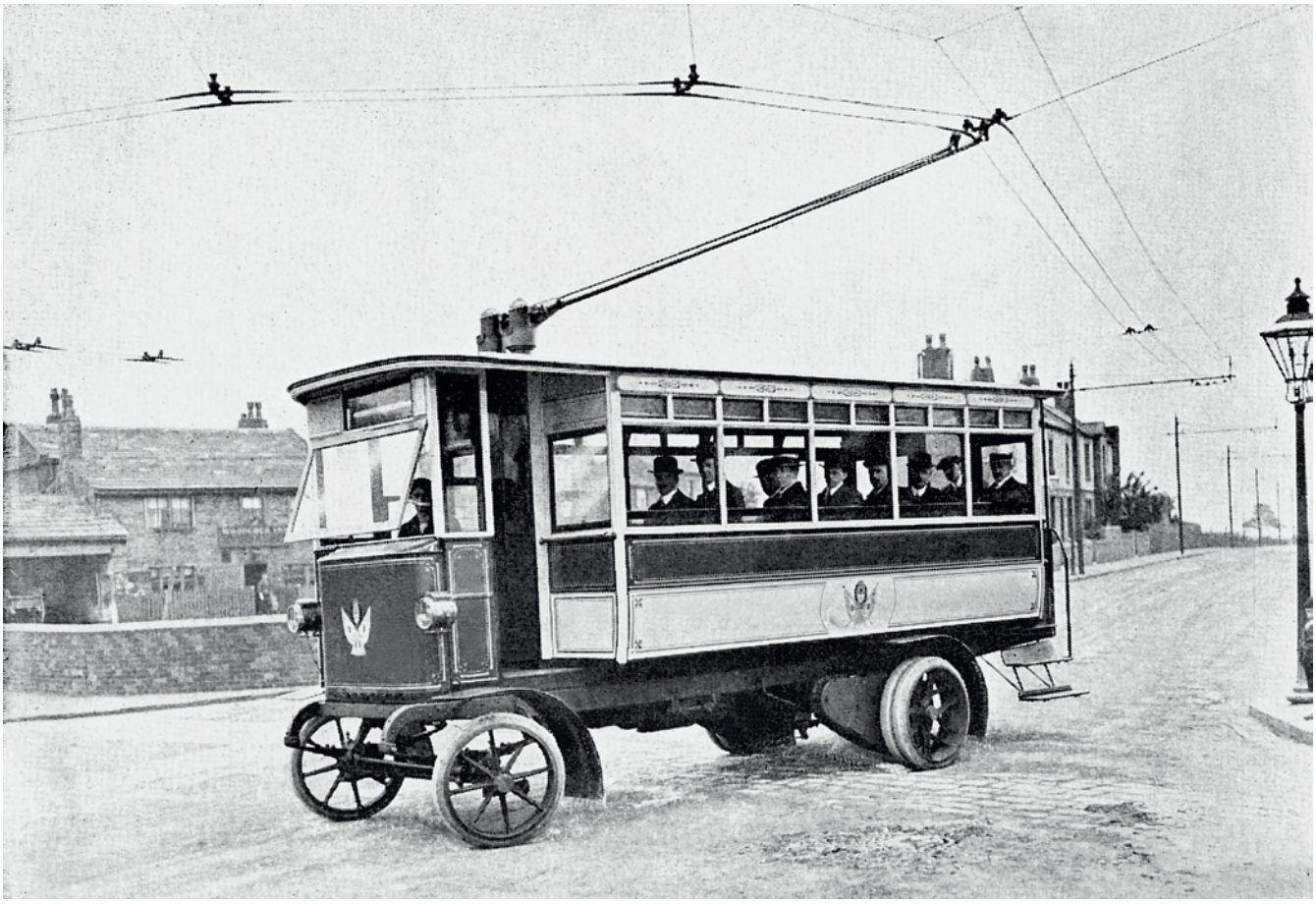
proposal had developed to an advanced state by 1914 but stalled because of the Great War. It is possible that the railless scheme was conceived as part of this proposal. (Robert Crawley, West Country Historic Omnibus & Transport Trust)

Lavinia's husband, George Francis Julyan Polglase, became a director of The South American Railless Traction Company, which was registered on 1 August 1912. The company was the sole licensee under an agreement with the RET Construction Company for railless electric traction in Latin America. During the first business year a large interest was acquired in the Argentine Power and Railless Traction Company (registered in Argentina on 12 August 1913) with hydro-electric installations on the Mendoza river and RET concessions in the provinces of Mendoza and St Luis. The company also had concessions to develop railless systems in Santiago and Buenos Aires and, under the terms of the agreement, to supply RET equipment and to construct railless lines in several other countries. A statutory notice announcing this stated that a trial railless line of 3 km had been constructed in Mendoza and that it was intended to build further lines totalling 82 km but no further details were given. As events were to unfold the trial line lasted for less than two years and the proposed expansion did not happen. *(The South American Yearbook (London)* published in 1915)

Page 65. As in many towns, the rejection of suggestions for the introduction of trolleybuses did not always end the debates and **Bristol** was one such place. The proposal to replace the trams by motorbuses was criticised by Mr G H Barnard, of the Coal Utilisation Council, in an address given in the city in October 1936. In sentiments now widely accepted some eighty years later he said that the increasing number of internal-combustion-engined vehicles on the streets was creating a danger to public health and he strongly advocated a careful investigation into the merits of trolleybuses, adding that from a national and citizen point of view, with their many advantages, they should be carefully investigated before any decision was reached. (*Commercial Motor*, 16 October 1936)

Page 65. While the outbreak of war in August 1914 prevented the construction of the **Reading** Bridge and implementation of the newly acquired railless powers the General Manager did obtain a quotation from the RET Construction Company of £925 per vehicle, which he presented to the Transport Committee in February 1915. He suggested the possibility of a short experimental line along Bath Road from the tram terminus to the limit of the authorised railless route at Liebenrood Road (about ½ mile) for which the corporation had sufficient suitable tramway traction poles, overhead wire and fittings in stock but this was not pursued. In December 1919 the corporation introduced a motorbus service from Tilehurst to Caversham largely over the authorised railless route except that it used Caversham Bridge instead of the, as yet unbuilt, Reading Bridge. (David Hall, *Reading Trolleybuses*, Trolleybooks, 2018)

The Mendoza railless vehicle on test at Farnley Moor Top, Leeds in 1913. The terraced houses in the background still stand. *Geoff Lumb Collection*



Page 67. The **Cheltenham District Traction** company was acquired by Red & White Services Ltd in 1939 but continued its separate existence even after nationalisation brought it under the control of Bristol Tramways Ltd (later the Bristol Omnibus Company) in July 1950. It was fully absorbed into the Bristol company in 1980 and dissolved in 1987 by Statutory Instrument 1987/1613 – The Bus Companies (Dissolution) Order 1987. This process was necessary as the company had been incorporated under the Cheltenham District Traction Act 1929.

Page 71. Midland Red had gained a foothold and a garage in **Worcester** when the chassis of the Worcestershire Motor Transport Company's motorbuses were requisitioned by the army in 1914. Midland Red fitted the displaced bodies on new Tilling-Stevens chassis, a type not favoured for military use, and thereby increased its presence in the city and surrounding area. The additional motorbuses needed to replace the corporation's trams in 1928 created accommodation problems and so a second garage was opened in the former works of the Westinghouse Brake and Saxby Signal Company. (Malcolm Keeley, *Midland Red Garages)*

Page 78. At a special meeting of **Oldbury** Urban District Council in 1912 it was agreed that an instruction be given to the Electricity and Tramways Committee to consider the possibility of arranging for a service of trackless trams or other suitable motor traction for passengers between Oldbury and Blackheath (2¼ miles) and between Oldbury and Langley (1 mile). Perhaps the introduction of motorbus services locally in 1913 by the fledgling Birmingham & Midland Motor Omnibus Company persuaded the council not to pursue the matter. (*Light Railway and Tramway Journal,* 21 July 1912)

Page 78. A trolleybus demonstration was held at **Coventry** in July 1922. The vehicle was the Trackless Cars demonstrator that had been demonstrated to delegates attending the congress of the Tramways and Light Railways Association at Bournemouth on 23 June and was demonstrated during the following week to London United Tramways officials at Fulwell.

On arrival in Coventry on 7 July, having been towed there by a steam tractor on its way from London to Birmingham, it was inspected outside the Council House by the Chairman of the Tramways Committee, two councillors and the Tramways Manager.

Its visit to Birmingham is, despite a search of both municipal records and local newspapers, something of a mystery. It is likely that it was at least inspected but there is no documentary or photographic evidence that it was demonstrated either along tram track with a skate or under the newly-erected trolleybus wiring, which might not have been completely installed and energised at that time.

Having returned from Birmingham, on the afternoon of 12 July it was demonstrated to members of the Transport Committee who travelled from the Spon Lane terminus of the Allesley Road tramway and through the city centre to Priestley's Bridge tram depot in Stoney Stanton Road. According to the *Midland Daily Telegraph* it aroused the curiosity of "hundreds" of bystanders. To what extent the committee was considering trolleybus operation at the time is not known. (F K Farrell, *The Tramway Review* No. 30, also *Coventry Herald* and *Midland Daily Telegraph*, all courtesy of Paul Fox, and research by John Kennedy)

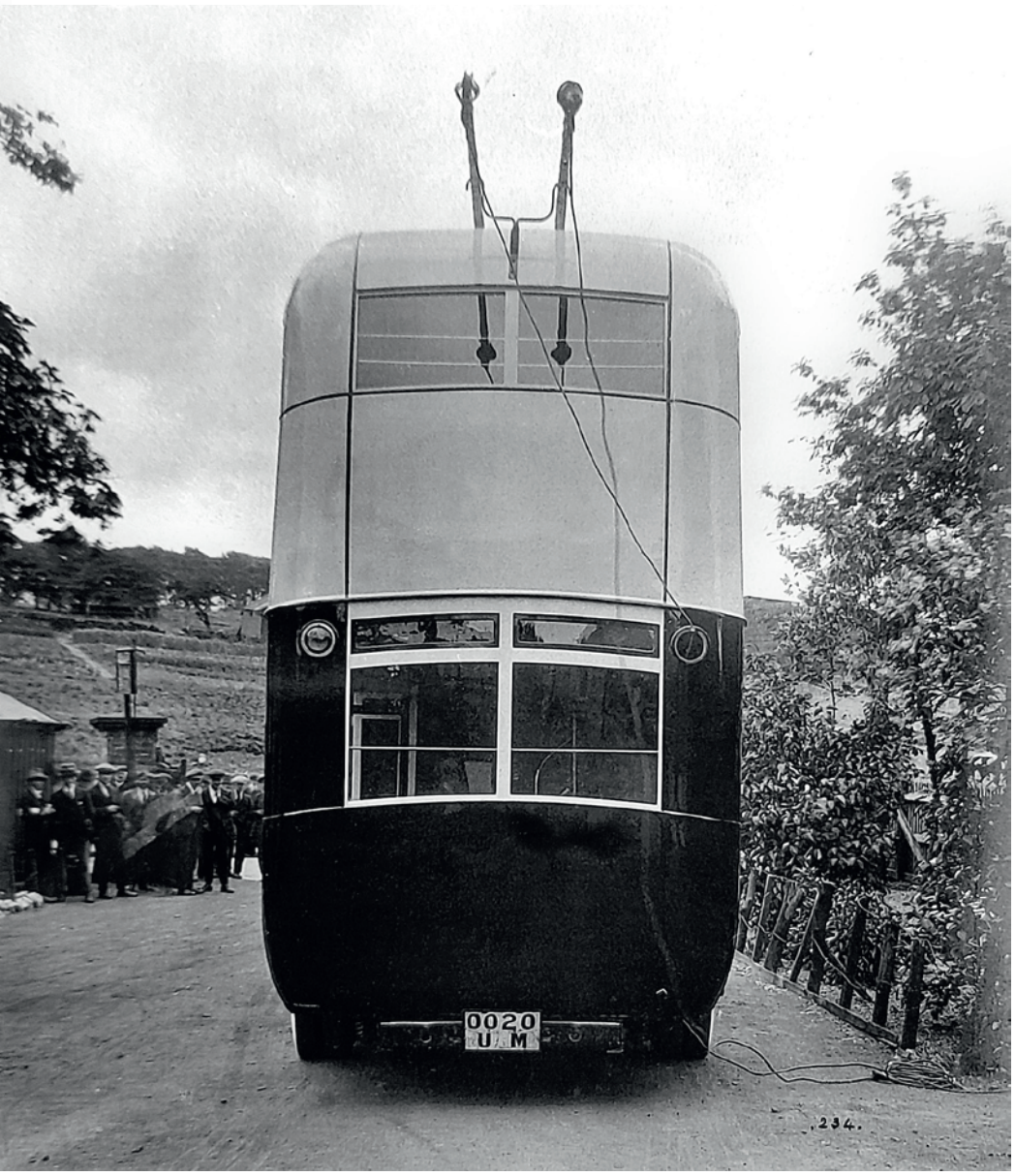
(It can be noted in passing that on the following day after this demonstration, 13 July, one of Birmingham's new Railless double-deck trolleybuses was tested at Leeds on the Guiseley – Otley route.)

A busy scene at Broadgate in the centre of Coventry through which the Trackless Cars demonstrator passed on 12 July 1922. *Commercial Postcard*

The Trackless Cars demonstrator parked at Coventry's Priestley's Bridge tram depot looking a little less pristine than it did in Leeds before its journey around the country. Note the position of the bamboo retrieving stick on hooks attached to the window pillars. *Travel Lens Photographic*

Before embarking on its tour of the country, the Trackless Cars low-height (13 feet 10 inches) demonstrator was tested on the Leeds system on 17 June 1922 and this photograph is one of a number taken on that occasion. Before it was acquired by Leeds Corporation in December 1923 an upper deck windscreen replaced the destination indicator. *Blackburn Aeroplane Co., Geoff Lumb Collection*

An official nearside view of the Trackless Cars vehicle at Leeds before it was towed to Bournemouth and elsewhere as described here. Unfortunately, no photographs of the interior have come to light but the trade press was effusive in its praise, referring to the polished maple and pine woodwork and the green Pegamoid imitation leather-covered spring-cushioned seats and padded seat-backs. *Blackburn Aeroplane Co., Geoff Lumb Collection*



The rear of the Trackless Cars vehicle had a stylish appearance, helped by the absence of an open rear stairway, quite unlike the earlier open rear staircase double-deckers that had been built by this time for operation in Leeds and Bradford. The registration number 0020UM was a trade plate. *Blackburn Aeroplane Co., Geoff Lumb Collection*

Page 78. In January 1912 the *Light Railway and Tramway Journal* reported that the mayor of **Nuneaton** had visited the Leeds system and was greatly in favour of having railless vehicles locally. The following month a report was presented to the Town Council by the Highways Committee who were of the opinion that a railless service would be of great benefit to the borough and that the route most likely to be remunerative would be from the town centre to the borough boundary at Chapel End, a distance of 3¾ miles. The report stated that the capital required, including the overhead equipment, provision of four cars and car shed etc., would be £9,000. The Highways Committee suggested that a special sub-committee should be appointed to go further into the matter and by a casting vote of the Mayor it was decided to appoint such a committee. However, as stated on page 78, the corporation decided in 1913 to purchase motorbuses instead although this decision was not pursued for the reasons shown. (*Light Railway and Tramway Journal*, 16 February 1912)

Page 82. The seven systems visited by the **Leicester** Tramways Committee in December 1935 were Birmingham, Chesterfield, London, Huddersfield, Manchester, Nottingham and Wolverhampton.

The discussions with their hosts were formally recorded and covered operational and maintenance issues of both trolleybuses and motorbuses. At this time Manchester was not a trolleybus operator and the preference of its General Manager, Mr R Stuart Pilcher, for motorbuses is clear in the committee's report of their visit. The General Manager at Huddersfield, Harold Godsmark, had a very different view, extolling the virtues of the trolleybuses which had been operating in the town for two years. One interesting point made by him was that, while the current fleet were all three-axle double-deck vehicles, it was possible that some two-axle and single-deck vehicles might be required in future. As events unfolded all Huddersfield's trolleybuses were three-axle double-deckers.

It is noteworthy that the visit to London was hosted by Mr A A M "Bill" Durrant, the Chief Engineer (Buses and Coaches) who admitted that he was "not so interested in trolleybuses", and included a visit to London Transport's motorbus overhaul works at Chiswick before proceeding to Fulwell trolleybus depot and overhaul works. It is possible that the General Manager (Tramways), Theodore Eastaway Thomas who was responsible for the trolleybus system, was not available on the day as the deputation might then have returned to Leicester more disposed towards the advantages of adopting trolleybus operation themselves. (Mike Greenwood of the Leicester Transport Trust, via Michael Russell)

Page 87. **Mansfield**. The renaming of Hucknall-under-Huthwaite to plain Huthwaite in 1907 may have created some confusion for astute readers. The text mentions both "a 5¼ mile route to Huthwaite" and "a branch from the Hucknall route". Note that the map states that Hucknall Lane is now Huthwaite Road. (Roger Smith)

The Mansfield District Traction Company was acquired by the Midland Counties Electric Supply Company, a Balfour Beatty subsidiary, in 1937. In 1948 the Midland Counties company was nationalised and vested in the new British Electricity Authority while Mansfield District Traction was transferred to the British Transport Commission. Following the formation of the National Bus Company in 1970, it became part of East Midland Motor Services. It was dissolved in 1987 by Statutory Instrument 1987/1613 – The Bus Companies (Dissolution) Order 1987. This process was necessary as the company had been incorporated under the Mansfield District Traction Act 1929.

Page 90. The **Northampton** delegates who attended the Hendon demonstration in September 1909 wasted no time in sending a deputation to inspect the railless installations at Ahrweiler and Mülhausen. Their report, which was apparently presented to the council in November, lists the members as: Councillor Collier, Tramway Committee Chairman; Mr J Gootschalk, Tramways Manager, and Mr A Fuller, Borough Engineer. (*Light Railway and Tramway Journal*, 3 December 1909)

Page 93. In June 1910 the General Manager of **Lowestoft** Corporation Tramways was directed to submit a report to the next meeting of the council on the trackless trolley system in connection with the Kessingland Light Railway. This had been authorised by the Light Railway Commissioners in 1902 by an Order made under the Light Railways Act 1896 for what was probably to have been operated by the East Anglian Railway Company as a tramway, rather than a railway, between Great Yarmouth and Kessingland via Lowestoft. However, in 1904 the powers were transferred to Lowestoft Corporation which had opened its system in July 1903. The tramway from Lowestoft to Kessingland was never constructed and it would seem that the corporation wished to consider the use of railless vehicles for the 4¼ mile route instead. (*Light Railway and Tramway Journal,* 1 July 1910 and David Pearson)

If trolleybuses had been used instead of the trams proposed by the East Anglian Railway Company they would have served the full length of London Road, as did the corporation trams. The later, 1920, trolleybus proposal would have seen trolleybuses running along London Road for a short distance in order to cross the outflow from Lake Lothing. *Commercial postcard*

Page 94. At a meeting of **Colchester** Town Council in 1901 the Tramways Committee recommended that the council should approach the Board of Trade with reference to the proposed adoption of a system "of cars propelled on the electric trolley system, but without the expense of tram lines, which, in other words, would mean a system of electrical omnibuses". The report was adopted but the response of the Board of Trade is not known. This proposal was three years before the municipal tram system opened and twenty-six years before the council obtained parliamentary powers under the Colchester Corporation Act 1927 for the system described on page 94. It also pre-dates by two years the granting of parliamentary powers for railless schemes at Leigh and Stroud. (*Street Railway Journal*, 10 August 1901, courtesy of Ashley Bruce)

Chapter 7 - North West England

Page 97. The councillor at **Wallasey** who arranged a trolleybus demonstration at Wigan was Clarence Frederick Rymer, a prominent businessman and local councillor (later alderman). Many of his enterprises were Merseyside-based but few of his ventures endured for very long owing to a persistent shortage of capital. He was an accountant by profession and his activities included motorcoach tours and express services, coachbuilding, road haulage, motor engineering, gentlemen's outfitting and coal merchant, many based in Liverpool and managed from a prestigious office in the Cunard Building at the Pier Head.

By 1918 he held the agency in Lancashire, Cheshire and North Wales for Tilling-Stevens petrol-electric vehicles and many of his motorcoaches were of this make. It is suggested by T B Maund that he may have thought it to be in his interests to promote the Tilling-Stevens petrol-electric technology and this is likely to be how the Wigan demonstration came to be arranged (see page 101). (T B Maund, *C F Rymer – A Remarkable Entrepreneur, Archive No. 18*, June 1998)

Clarence Rymer also held the local agency for AEC, which almost certainly explains the make of trolleybus, one of only six 602 models to be built, bodied by Strachan & Brown (B26R) and registered OL994; after also being demonstrated in Birmingham, St Helens, Birkenhead and Chesterfield it was sold to Mexborough & Swinton, numbered 31 and re-registered WT7757.(T B Maund, *Motor Coach Services On Merseyside 1920-1940, Part 1 - The Independents*, Omnibus Society, 1980)

Page 99. **Warrington** Corporation operated a five-route tram system that opened in stages during 1902. The Longford Bridge route, heading north from the town centre, was built with the understanding that South Lancashire Tramways would construct a tramway southwards through Newton-le-Willows to connect with it and enable a joint through service to be operated. However, this did not happen because the SLT company got into financial difficulties in 1904. Without the through traffic this would have generated the Longford Bridge tramway failed to cover its operating costs, even after one tram was cut down to become a single-deck one-man-operated car.

In February 1912 the Tramways Manager was instructed to report to the council on the working and cost of motorbuses for linking local tramways (*Commercial Motor*, 15 February). It would seem that the scope of this instruction was widened because at a meeting of the council in March 1912 Councillor Hawthorn asked for details of the proposal to introduce railless traction. He was told that two schemes were under consideration and that details would be brought forward as soon as possible. No further details have been found about this proposal but it is possible that conversion of the Longford Bridge tramway to railless operation might have been one of the two schemes mentioned.

It is noteworthy that in 1913 the corporation introduced a motorbus service in the town, using petrol-electric vehicles. (*Light Railway and Tramway Journal,* 15 March 1912 and various internet sources)

Page 101. In 1921 a businessman at Wallasey, Clarence Rymer (see page 97), became interested in furthering the cause of the trolleybus and it is suggested by T B Maund that he may have thought it to be in

his interests to promote the Tilling-Stevens petrol-electric technology developed in 1912 as he held the local agency for that company. On 27 November 1921 **Wigan** Council agreed to a demonstration of a trolleybus but the sequel is unknown and the likelihood is that it did not actually take place. (T B Maund, *C F Rymer – A Remarkable Entrepreneur, Archive No. 18* June 1998)

In 1921, soon after the war, it was a little early for manufacturers to be risking expenditure on building and promoting trolleybuses – the first new systems did not open until 1920 in York and 1922 in Birmingham (although Halifax had opened in 1921 albeit with vehicles second-hand from Dundee). The only systems operating in Lancashire in 1921 were at Ramsbottom and Oldham as noted in Appendix C.

Clarence Rymer, as already noted on page 97, had wide-ranging business interests so it is not unreasonable to speculate that he might have had some business connection with Wigan Council. Without seeing the full exchange of correspondence between Mr Rymer and the council there is no reason to think that the council "agreeing to a demonstration" implies it would be held imminently. Perhaps Mr Rymer had been given an early indication that Tilling-Stevens intended to expand their business into the manufacture of trolleybuses and he was merely, and prematurely, preparing the ground for a demonstration.

Tilling-Stevens did not commence the manufacture of trolleybuses until 1923 when six were supplied for the inauguration of the Wolverhampton system. In 1924 at the instigation of the General Manager of the Tees-side Railless Traction Board, Mr J B Parker, Tilling-Stevens built a petrol-electric trolleybus that could travel away from the overhead wires as a petrol-electric motorbus or stay under the wires as a trolleybus. It was, however, was used mostly as a trolleybus until its withdrawal in 1936. Tilling-Stevens struggled to attract orders during the 1920s and around 1927 the company started manufacturing conventional petrol chassis. By 1930 only thirty-five trolleybuses had been built – for Wolverhampton (32), Ipswich (1), Tees-side (1), and Torino (1). (Geoff Lumb, *British Trolleybuses 1911-1972*)

Page 111. In August 1946 Bolton Corporation established a sub-committee to investigate the relative merits of trolleybuses and motorbuses. By January 1947, based on the findings of a delegation that visited several systems, a recommendation, supported by a report from the General Manager, Arthur Jackson, was made to the council to approve the decision of the transport committee in favour of providing trolleybuses on suitable routes. Mr Jackson's report stated that the estimated operating costs per vehicle-mile for trolleybuses were 18.2d and for motorbuses 17.45d. With the addition of capital charges, the cost per mile would be 21.53d for trolleybuses and 20.64d for motorbuses.

Mr Jackson estimated that to provide the necessary overhead line equipment at current prices and to supply two new tower wagons would cost £39,100. This would involve capital charges amounting to 0.22d per vehicle mile, which was included in the total of 21.53d. For six-wheeled trolleybuses the total operating costs would be 22.63d per vehicle-mile. Mr. Jackson stated that the additional costs would be offset by the extra revenue which the six-wheeled trolleybuses would earn.

The council accepted the recommendation at a meeting during which Councillor Walsh said that in the past the corporation had been "married to motorbuses but that this policy would not be followed in future". He quoted the case of Wolverhampton, which had 100 trolleybuses on order and had in ten years paid for all its vehicles and contributed more than £100,000 to the relief of rates. The council approved the recommendation by 45 votes to 30. Alderman Bentley was among those not in favour of accepting the committee's recommendation, saying that Birmingham did not favour trolleybuses and alleging that Nottingham wished that it had not introduced this type of vehicle.

In June 1947 the Transport Department budgeted £374,000 in the 1950-51 for the purchase of trolleybuses, the number of which was not stated. The Bill seeking the necessary powers was deposited in November 1948 and the Act received the Royal Assent on 30 July 1949. (*Commercial Motor*, various issues)

Not only did Bolton plant new poles, initially for lighting but of the correct rake and strength for overhead wiring, on some entirely new routes (mainly projections beyond former tram termini) but also some span wires were erected across the second lane of the Howell Croft bus station in anticipation of the introduction of trolleybuses along Deane Road and Wigan Road to Westhoughton. (Phillip J Taylor, *A Trolleybus to the Punch Bowl*)

Page 116. **Haslingden** Corporation obtained parliamentary powers in 1906 to construct tramways on three routes, including one to Helmshore (1½ miles distant), and to operate motorbuses. The Transport Committee initiated a motorbus service to Helmshore in 1907 using a single Leyland vehicle but the service was not a complete success and was withdrawn in 1909. Meanwhile, in 1908 corporation acquired and electrified the steam tramway of Accrington Corporation within the borough as part of the

Passengers in Bolton's town centre were served by seven bus stations and street terminal points in municipal days of which that at Howell Croft was the terminus of the South Lancashire Transport trolleybus route to Four Lane Ends, Atherton and Leigh. The town centre has undergone much redevelopment since the trolleybuses last operated in 1958; Howell Croft bus station is now the site of a multi-storey car park and a new transport interchange nearby opened in 2017 to bring greater convenience for passengers. However, the Town Hall clock tower seen here remains. The trolleybus is SLT 68, one of six Sunbeam MS2s purchased in 1948 and the motorbus is Bolton 259, one of a batch of 75 Crossley DD42/3s purchased in 1946 for tramcar replacement. *Jack Batty, Alan Murray collection*

planned through route between Accrington and Rawtenstall, which was operated by Accrington Corporation.

Reports of the new railless systems operating in Leeds and Bradford prompted the council in May 1912 to discuss the establishment of a service of "railless traction tramways" along the Helmshore route. The fact that it was not until 1919 that the council introduced another motorbus service to Helmshore suggests that the railless service was deemed to be too expensive. (Peter Hesketh, *Trams in the North West*, and *Light Railway and Tramway Journal*, 3 May 1912)

Page 118. The small (2¾ miles) tramway system at Nelson was part of the network operated with the neighbouring systems at Burnley and Colne, which from 1 April 1933 were managed by a Joint Transport Committee formed with representatives from each borough.

In 1913 the Tramways Committee considered the provision of railless vehicles for the Walverden and Southfield districts of the town because the extension of the tramway system to serve these areas was regarded as impracticable. Some of the streets along which track would have to be laid were narrow and could not be widened without serious expenditure being incurred. Also, the bridge in Railway Street had insufficient headroom to permit the passage of double-deck trams.

The committee considered the claims of motorbuses and railless vehicles and appointed a delegation to visit a number of towns where they were in use. In February, the Tramways Committee, having received a report on visits to Bradford, Keighley and Ramsbottom, unanimously decided to recommend the council to adopt such a scheme for these routes for which four vehicles would be required but as parliamentary powers were not sought it is likely that the council did not endorse the recommendation. However, by 1923 powers had been obtained to operate motorbuses on three feeder routes (from Market Square to Cloverhill, to Waldhouse Road and to Marsden Hall Road) and these were absorbed into the Joint Transport Committee in 1933. *(Light Railway and Tramway Journal*, 2 January 1914, and 6 and 13 February 1914; also Peter Hesketh, *Trams in the North West*)

The first electric trams always attracted a crowd especially when a photographer appeared to record the new cars. There was money to be made in printing the pictures as postcards and selling them as souvenirs and they form an important historical record for today's historians. This view records Accrington 11 presumably in Haslingen (the location was not recorded on the picture).

Page 118. Developments in the design and reliability of motorbuses caused Preston Corporation to re-consider its trolleybus proposals, which would have committed the council to twenty years of upkeep and maintenance. A decision was therefore taken to use motorbuses to replace the trams and the first conversion took place in 1932 on the Broadgate to Farringdon Park route. The conversion programme was completed on 15 December 1934 when the circular route from the Town Hall to Fulwood operated for the last time. (mainly *Commercial Motor*, 17 March 1933)

Page 119. The Earl of Carlisle owned land in Cumberland, on which he constructed a number of coal mines between Brampton (to the east of Carlisle) and Lambley (south of Haltwhistle) – a distance of about nine miles – as well as a private railway to connect them to the Carlisle to Newcastle main line at Brampton Junction. A horse-drawn passenger service was provided between Brampton and the main line at Brampton Junction from 1836 until 1881 although coal trains continued to serve the coal staithe at Brampton.

By the turn of the century there was a realisation that a passenger transport link was needed if the town was to develop. The population had grown to 3,557 by 1871 but was in decline. In 1903 four possible routes were surveyed for a tramway that would be built as a light railway and penetrate the town centre, which the railway did not, using small petrol tramcars seating sixteen passengers. The £20,000 capital outlay for this was deemed to be too expensive so in 1904 a modified scheme using railless vehicles on a 1¾ mile route terminating in High Cross Street was proposed but this attracted objections to the cost of the acquisition of property for demolition to accommodate the scheme.

In 1913 the North Eastern Railway took over the branch and introduced a steam passenger service that ran, except between 1917 and 1920, until 1923. (Mike Fenton, *Backtrack Magazine*, courtesy of Roger Smith)

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Page 125. Further research has failed to identify the trolleybus seen by Charles Hall in Sheffield in 1924 but of the four double-deckers in the Leeds fleet 513, the former Trackless Cars demonstrator, is the most likely candidate. However, the circumstances remain unknown.

Page 129. Early in 1913 it was reported in the *Light Railway & Tramway Journal* that negotiations were taking place with the object of establishing a railless system between Barnsley and Goldthorpe via Stairfoot, Wombwell and Darfield (9 miles) and possibly to Doncaster (about 7½ miles beyond Goldthorpe). The parties to these talks were not identified but the fact that motorbuses were becoming well-established in the area by this time might have been one of the reasons why the proposal did not

proceed. (*Light Railway & Tramway Journal*, 10 January 1913)

Page 129. **Todmorden** Corporation obtained parliamentary powers to construct tramways only then, on reflection, to realise that the cost of doing so would be prohibitive. On 1 January 1907 it introduced motorbus services on three routes in the town. On 31 January 1912 the council considered the adoption of the railless system following the report of a delegation who, before visiting Bradford and Leeds, had been sceptical as to the suitability of the system but were now fully satisfied it was in every way suitable. The ease, comfort, silence of running and absence of jerking were favourably remarked upon. The cost of running was stated to be about 6d or 6½d per car mile, compared with 13d per car mile for the motorbuses currently in use. The report was adopted and the council resolved to discuss it further in committee. It is possible that, once again, the cost of inaugurating such a system in a small town was the reason the proposal did not proceed. At the time, the municipal motorbus fleet comprised just seven vehicles. (*Light Railway and Tramway Journal*, 2 February 1912 and Local Transport History Library website)

Page 132. The Farnley route of the **Leeds** system was in fact abandoned in two stages. By early 1926 the General Manager, William Chamberlain, was becoming concerned about the double-deck trolleybuses used on the route, despite them having been in service for only two or three years. Early railless vehicles and trolleybuses were often found to be inadequate for the stresses of intense urban operation to which they were subjected. By March 1926 all of the double-deck trolleybuses (510-513) on the Farnley route had been withdrawn, possibly because of their archaic steering mechanism. On 10 March 1926 the route was curtailed at the Cattle Market and an AEC 602 demonstrator (NW9583) was used to provide the service until 3 July 1926 when two motorbuses replaced it. The overhead wiring was not removed until March and April 1929. (J Soper, *Leeds Transport, volume 2* – 1902-1931)

Page 132. Leeds Corporation electric trams arrived at **Guiseley**, nine miles from Leeds city centre, in 1909 and prompted calls for their extension to Otley (about 3 miles) and Burley-in-Wharfedale (about 2 miles) but the corporation deemed that this would be too costly. An earlier proposal by the Mid-Yorkshire Tramways Company for a tramway from Shipley to Guiseley with branches to Otley and Ilkley had come to nothing.

In November 1911 the Leeds Tramways Committee received a letter from solicitors in London whose (un-named) client proposed to seek parliamentary powers for railless routes from Guiseley to Otley and, via Burley-in-Wharfedale, to Ilkley. The corporation had no objection to this but the promoter missed the deadline for submitting private Bills for the 1912 Session and nothing more was heard of the scheme. The Tramways Committee therefore decided to promote its own scheme and submitted a Bill in November 1912 for the 1913 Session which culminated in the introduction of railless vehicles to Otley and as far as Burley-in-Wharfedale in 1915. (J Soper, *Leeds Transport, volume 2 – 1902-1931*)

Leeds Corporation built this substantial depot at Guiseley which was used by the trolleybuses for the Otley and Burley-in-Wharfedale routes until 1928, as well as trams until 1934, after which it was let for commercial purposes until being converted in 2003 into a gymnasium and twenty-one apartments. *Jackie Hate*

Page 132. **Skipton** was one of the many towns that were attracted to railless traction following the opening of the systems at Leeds and Bradford. In December 1911 the Town Council passed a resolution for the inclusion of a railless scheme in its next Bill for various local improvements. However, when the Bill seeking powers to generate and distribute electricity in the town was deposited in 1914 it included no reference to such a scheme. (*Commercial Motor*, 28 December 1911 and *London Gazette*, 24 November 1914)

Page 135. Although the tram system had opened as recently as 6 May 1904, it is curious that only seven years later the RET company was preparing a railless scheme for Scarborough and requesting from the local council an estimate of the cost of removing the tram tracks and reinstating the roads. At a meeting of the council on 19 October 1912 it was reported that a "syndicate" were desirous of taking over the present electric tramway company's business and run the trams, obtain as much out of the present track as possible and then gradually take it up and run railless vehicles. The matter was referred to the Streets and Works Sub-committee to consider and report upon.

As already noted on page 14, **Scarborough** was one of the schemes being considered by the Railless Electric Traction Company when it was taken over by the RET Construction Company in 1911. Whether the syndicate mentioned here refers to the new company or a separate venture is not known. (*Light Railway and Tramway Journal*, 25 October 1912)

Page 138. The picture shows a Stirling motorbus belonging either to the Durham County Motor Transit Company of **Spennymoor**, which had two and commenced operations in the area in 1904, or to Vincent Brothers of Tudhoe Colliery, which had one. Stirling motorbuses were expensive, unreliable and short-lived in those pioneering days and the picture can be dated to between about 1904 and 1907. Neither DCMT vehicle had mudguards when built, a feature that is the principal visual difference between the manufacturer's official pictures and the postcard view in Spennymoor. (Philip Battersby)

Page 141. The statement about **Tynemouth** Fish and Goods Station now being Tynemouth Metro Station is incorrect. The stations are at different locations and the Fish and Goods Station has since been redeveloped for housing. (Roger Smith)

Page 146. "BET had interests in just two trolleybus systems, Llanelly and Mexborough & Swinton". Also Hastings, which was a subsidiary of Maidstone & District that was itself a BET subsidiary. However, for most of its existence the Llanelly system was part of the Balfour Beatty group, not British Electric Traction. A BET connection arose only after nationalisation of the electricity supply industry when sale to the South Wales Transport Company, a BET subsidiary, was negotiated with the intention that the trolleybuses were to be replaced as soon as possible, which occurred less than nine months after the transfer had taken place. (Alan Murray and John Priestley)

Page 146. Like many tramway operators, **Sunderland** Corporation considered adopting trolleybus operation but did not go as far as applying for parliamentary powers to do so. The matter was discussed in 1938 when it had already been decided to replace the trams by motorbuses. The earlier railless scheme for Sunderland and South Shields is among several such RET proposals mentioned on page 14. (Michael and Peter Waller, *British & Irish Tramway Systems since 1945*)

British Electric Traction had interests for part or all of their existence in the following tramways mentioned in this book:

Barnsley and District Electric Traction Company (page 129) – see above
Barrow-in-Furness Tramways Company (page 120)
Birmingham and Midland Tramways Joint Committee (page 75)
Dewsbury & Ossett Tramways Company (page 132)
Gateshead and District Tramways Company (page 142)
Leamington & Warwick Electrical Company (page 78)
London United Tramways Company (page 28)
Merthyr Tydfil Electric Traction & Lighting Company (page 148)
Metropolitan Electric Tramways (pages 22-24)
Peterborough Electric Traction Company (page 93)
South Metropolitan Electric Tramways and Lighting Company (page 38)
South Staffordshire Tramways (Lessee) Company (page 75)
Southport Tramways Company (page 113)
Tynemouth & District Electric Tramways Company (page 142)
Worcester Electric Traction Company (page 71)
Yorkshire (Woollen District) Electric Tramways Company (page 129)

Chapter 9 - Wales

Page 147. While in 1911 the Cardiff Transport Committee had pondered the possibility of opening railless routes to a number of areas on the outskirts of the city, including **Llandaff,** the need for the provision of public transport was discussed at a meeting of the Llandaff and Dinas Powis Rural District Council early in March 1912 when the Electric Lighting Committee reported that Llandaff was in an isolated position and that people were fervently hoping that something would be done to connect them with Cardiff. The committee recommended, and the council agreed, that Messrs A H Bullock, W Evans and Mr Herbert Lewis (consulting engineer) should inspect the Bradford railless installation so that the question of railless cars could be considered afresh after their report on that visit. (*Light Railway and Tramway Journal*, 8 March 1912)

Page 150. At the beginning of 1909 the **Newport** Tramways Committee were considering the extension of the tramway system to outlying villages and districts. In connection with this, Mr H C Bishop, the General Manager, presented a report in favour of using railless vehicles for these extensions in which he pointed out that a number of towns were proposing to adopt the railless system where the traffic conditions prohibited tramways. He recommended a number of suitable routes, totalling 13 miles both within and beyond the borough, and produced an estimate in support of this. All the trams in use had conductors and seated about 20 passengers and he proposed to design a railless vehicle on the pay-as-you-enter principle, thus dispensing with one man and reducing the cost per car mile proportionately. His estimated costs (including capital charges) per car mile were 11.48d for tramcars and 7.58d for railless vehicles, a saving of 3.9d per mile. (*Tramway and Railway World*, 7 January 1909)

Page 151. A deputation from **Swansea** Borough Council visited Leeds and Bradford in 1913 and were impressed by the railless systems there, which they thought could well be adopted to reach the outlying districts of Llansamlet (4 miles) and Skewen (2 miles further). (*Light Railway & Tramway Journal*, 18 April 1913)

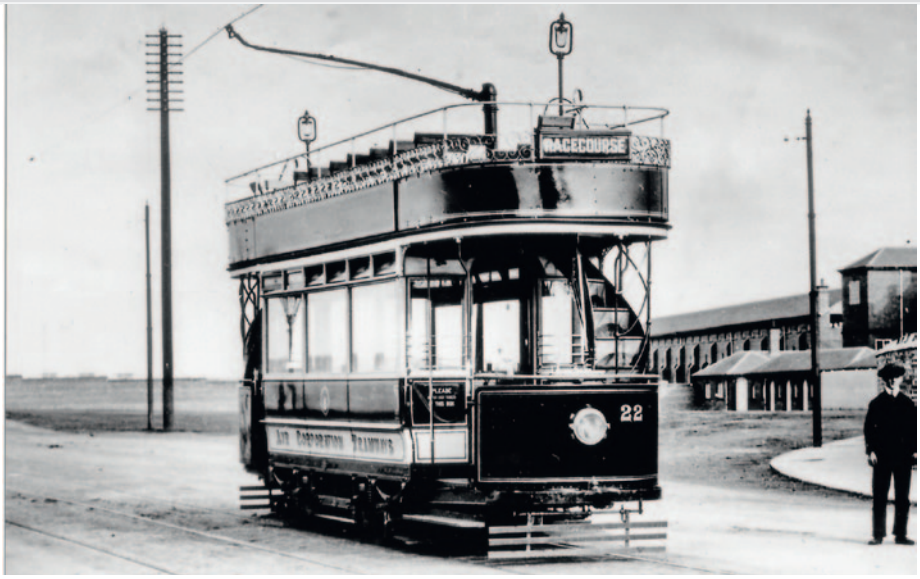
A digitally colourised commercial postcard view of the tram terminus at Stow Hill, Newport to where the municipal system had been extended in 1904. Following the introduction of motorbuses in 1924 the tram system was abandoned in stages between 1928 and 1937.

Page 153. **Ayr** Corporation had opened its tram system in 1901 with a line to Prestwick Cross, four miles north of the town centre, and extended this the following year 1½ miles southwards to the village of Alloway where Robert Burn's cottage and the monument to him at Brig o' Doon were popular attractions for visitors. In 1908 parliamentary powers were obtained for a tramway along Whitletts Road to serve the local racecourse and the Hawkhill district. In 1912 the council voted to proceed with the tramway but Bailie Learmont suggested that consideration of the matter should be delayed until an investigation had been made into the expediency of installing the railless system on the proposed route. Accordingly, a deputation visited the systems at Leeds and Bradford (probably in May) and were unanimous in their opinions that the tramway extension should instead be served by railless vehicles. However, their views were not sufficient to dissuade other councillors and the tramway opened in August 1913. (*Light Railway and Tramway Journal*, 15 March, 3 May and 7 June 1912)

Page 153. In March 1912 the chairman of the **Greenock** and Port Glasgow Tramways Company wrote to the Town Provost expressing the view that the railless system might be practical and useful in the higher parts of the town where the topography made it difficult to contemplate the construction of tramways. Two weeks later the Town Clerk was instructed to obtain information about the railless traction system and at a meeting of the council that month the question of installing railless traction from Dellingburn Street via Roxborn Street to Nicholson Street (1 mile) was discussed. A sub-committee was formed and instructed to consider the operation of railless vehicles in the upper districts of the town. (*Light Railway and Tramway Journal*, 22 March and 5 April 1912)

Page 153. **Glasgow**'s proposed route from Clarkston to Eaglesham did not proceed owing to reconsideration of the idea by councillors at a meeting in December 1922, which resulted in the deletion of the proposal from the Bill.

The proposal had emerged from a report by the Tramways Manager, James Dalrymple, to the Tramways Committee in March 1921 suggesting that trackless trolley cars could easily link such places as Cathkin Braes, Milngavie, Millerston and Coatbridge with existing tramway termini and that an experimental route from London Road to Braidfauld Road should be equipped. (Brian Deans, Stuart Little, *Glasgow Trolleybuses*, Trolleybooks, 2020)



Ayr racecourse moved to its present location in the town in 1907 and car 22 was one of two that entered service when the corporation's Whitletts Road tramway opened on 18 August 1913 to serve it. The location of this picture is not stated but is believed to be by the racecourse. (Photographer unknown)

Page 156. Parliamentary powers were obtained in 1906 by the Edinburgh Suburban Electric Tramways Company for a tramway from the Nether Liberton tram terminus to Bonnybrigg via Gilmerton and Eskbank with a branch from Eskbank to Dalkeith. Negotiations dragged on with the corporation for a number of years over a proposed northwards extension to the city centre and in 1908 a similar railless route was proposed by the Dalkeith Railless Electric Car Company. (David Hunter, *Edinburgh's Transport*) (It is unlikely that this was a scheme proposed by the Railless Electric Traction Company as the word "Car" rather than "Traction" was used in the title. No other reference to this company has been found and it was not on the list of the RET company's proposals which John Price prepared for me nearly fifty years ago when my interest in this subject was little more than idle curiosity.)

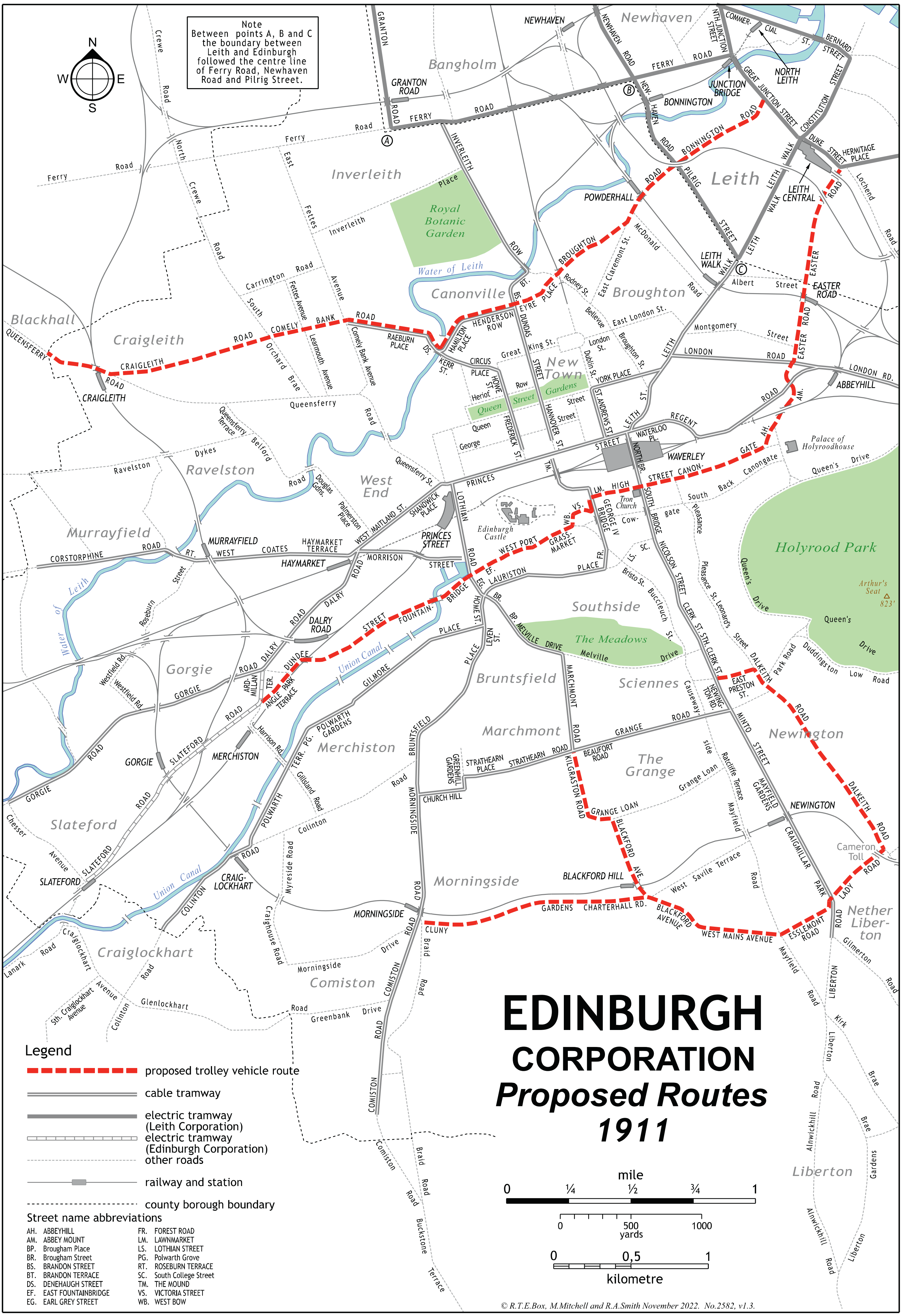
On 15 and 16 September 1911 a delegation of six council officials visited the Bradford and Leeds systems where they were welcomed by Messrs Spencer and Hamilton respectively. The visits made a favourable impression on the party who formed the opinion that the railless system was capable of satisfying the transport requirements of many districts not already served by public transport in and around the city. (*Tramway & Railway World,* 12 October 1911, courtesy Helen Grove, London Transport Museum library)

Tramway & Railway World reported on 21 October 1911 that the Lord Provost had expressed surprise that he had not been informed of discussions about a proposed railless route between the city and Leith, a route the corporation deemed to be so important that parliamentary powers were being sought for a connecting tramway.

The *Engineering Supplement of The Times* on 8 November 1911 reported that the Tramways Committee had decided "to do nothing further at present in connection with the proposal to adopt railless tramways for the city and district in view of information obtained regarding an improved type of petrol-electric omnibus which has been introduced in London". However, early in January 1912 it was reported that the Edinburgh Town Council had agreed that a meeting should be held with representatives of Leith Town Council to discuss the operation of railless traction for tramway extensions, one of which was a route terminating at the end of Easter Road in Leith to which Leith Town Council objected. (*Light Railway and Tramway Journal*, 19 January 1912)

The previous month, on of 25 October 1911, a newspaper article in *The Scotsman* included a map showing three proposed railless routes with a combined length of 10½ miles. Two of the routes would have entered Leith and a second article in the same edition stated that Leith Tramways Committee had decided the previous day not to enter into a discussion on the proposal until enquiries had been made and more information about it was available. (Mike Mitchell)

Speaking at the annual meeting of the Edinburgh and District Tramway Company in February 1912, the chairman said that the town council were proposing to introduce a system of railless traction to the city and had


EDINBURGH
CORPORATION
Proposed Routes
1911
Note
Between points A, B and C the boundary between Leith and Edinburgh followed the centre line of Ferry Road, Newhaven Road and Pilrig Street.
N
W
E
S
Legend
proposed trolley vehicle route
cable tramway
electric tramway (Leith Corporation)
electric tramway (Edinburgh Corporation)
other roads
railway and station
county borough boundary
Street name abbreviations
AH. ABBEYHILL
AM. ABBEY MOUNT
BP. Brougham Place
BR. Brougham Street
BS. BRANDON STREET
BT. BRANDON TERRACE
DS. DENEHAUGH STREET
EF. EAST FOUNTAINBRIDGE
EG. EARL GREY STREET
FR. FOREST ROAD
LM. LAWNMARKET
LS. LOTHIAN STREET
PG. Polwarth Grove
RT. ROSEBURN TERRACE
SC. South College Street
TM. THE MOUND
VS. VICTORIA STREET
WB. WEST BOW
mile
0
¼
½
¾
1
0
500
1000
yards
0
0,5
1
kilometre
Newhaven
Bangholm
Inverleith
Leith
Canonville
Broughton
Blackhall
Craigleith
New Town
Ravelston
West End
Murrayfield
Gorgie
Slateford
Merchiston
Bruntsfield
Marchmont
Southside
Sciennes
Newington
The Grange
Morningside
Craiglockhart
Comiston
Liberton
Nether Liberton
Cameron Toll
Holyrood Park
Royal Botanic Garden
Water of Leith
Union Canal
The Meadows
Edinburgh Castle
Palace of Holyroodhouse
Arthur's Seat 823'
NEWHAVEN
GRANTON ROAD
BONNINGTON
JUNCTION BRIDGE
NORTH LEITH
LEITH CENTRAL
POWDERHALL
LEITH WALK
EASTER ROAD
ABBEYHILL
WAVERLEY
PRINCES STREET
HAYMARKET
MURRAYFIELD
CRAIGLEITH
DALRY ROAD
GORGIE
MERCHISTON
SLATEFORD
CRAIGLOCKHART
MORNINGSIDE
BLACKFORD HILL
NEWINGTON
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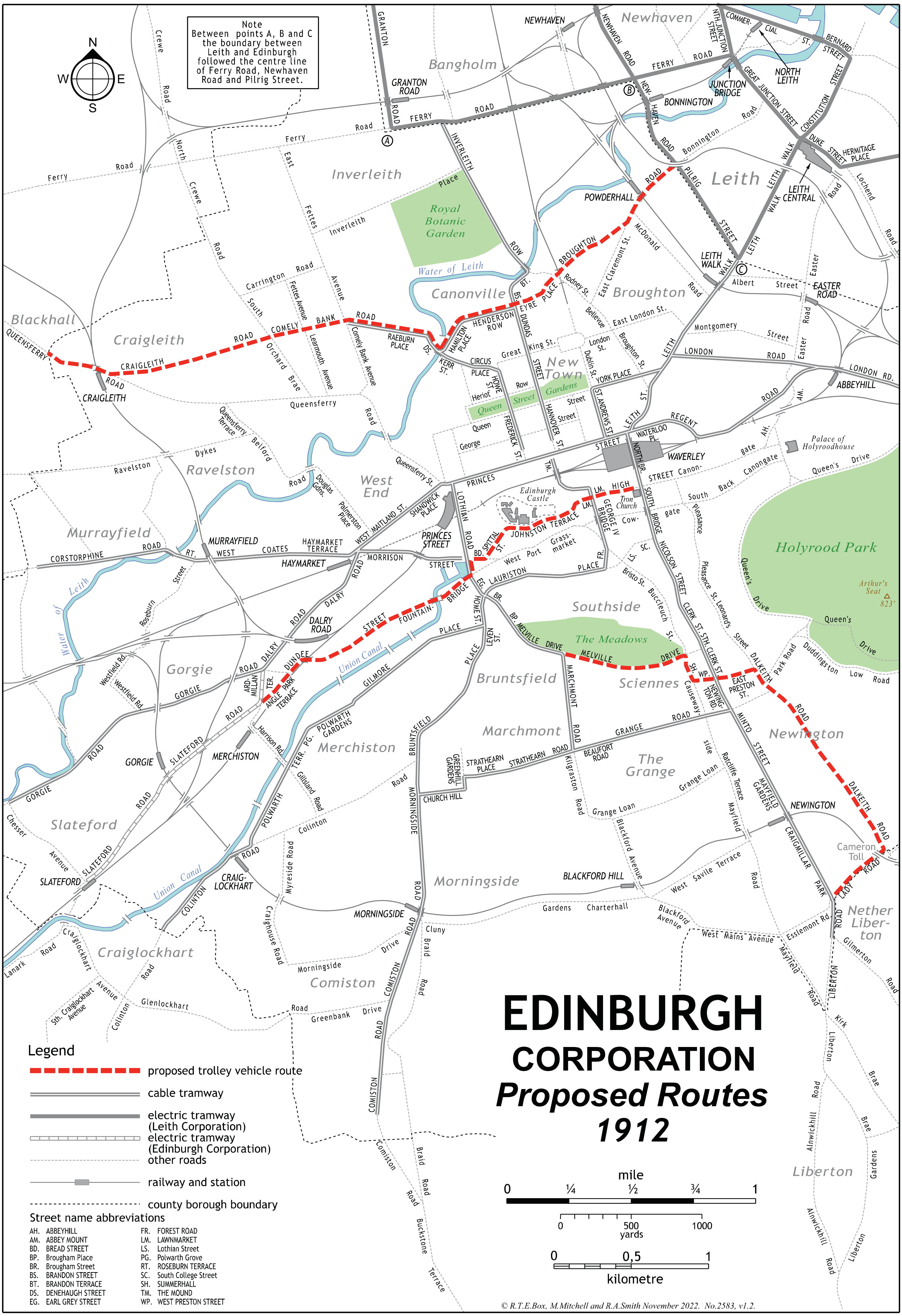
EDINBURGH
CORPORATION
Proposed Routes
1912
Note
Between points A, B and C the boundary between Leith and Edinburgh followed the centre line of Ferry Road, Newhaven Road and Pilrig Street.
N
W
E
S
Newhaven
Bangholm
Inverleith
Royal Botanic Garden
Water of Leith
Canonville
Broughton
Leith
NORTH LEITH
JUNCTION BRIDGE
LEITH CENTRAL
LEITH WALK
EASTER ROAD
POWDERHALL
BONNINGTON
NEWHAVEN
GRANTON ROAD
Blackhall
Craigleith
CRAIGLEITH
New Town
Queen Street Gardens
Ravelston
West End
Murrayfield
MURRAYFIELD
HAYMARKET
PRINCES STREET
WAVERLEY
Edinburgh Castle
Tron Church
Palace of Holyroodhouse
Holyrood Park
Arthur's Seat 823'
Gorgie
GORGIE
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SLATEFORD
MERCHISTON
Merchiston
Union Canal
DALRY ROAD
Southside
The Meadows
Bruntsfield
Sciennes
Marchmont
The Grange
Newington
NEWINGTON
Cameron Toll
Nether Liberton
Liberton
Morningside
MORNINGSIDE
BLACKFORD HILL
Craiglockhart
CRAIG-LOCKHART
Comiston
ABBEYHILL
Legend
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cable tramway
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other roads
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BP. Brougham Place
BR. Brougham Street
BS. BRANDON STREET
BT. BRANDON TERRACE
DS. DENEHAUGH STREET
EG. EARL GREY STREET
FR. FOREST ROAD
LM. LAWNMARKET
LS. Lothian Street
PG. Polwarth Grove
RT. ROSEBURN TERRACE
SC. South College Street
SH. SUMMERHALL
TM. THE MOUND
WP. WEST PRESTON STREET
mile
0 ¼ ½ ¾ 1
0 500 1000
yards
0 0,5 1
kilometre
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held discussions about this with the company. The directors thought that these railless cars would be to a certain extent be feeders to the tramway and offered their manager and assistant manager to the council to undertake the management of them. (*Light Railway and Tramway Journal*, 2 February 1912)

It seems that the map published in *The Scotsman* may have been for illustrative purposes only, or perhaps as part of the ongoing consideration into the transport needs of the city, because on 21 September 1912 the Burgh Engineer submitted a comprehensive report to the Tramways Committee in which he reviewed the options of using tramways (overhead, conduit, surface contact, petrol electric and horse powered), railless traction and motorbuses. In discussing the petrol electric option ("self-propelled cars") reference was made to the trials with such cars that were shortly to be conducted by the London County Council.

Cable trams at the junction of Princes Street and Lothian Road where the number of people standing around suggests that there has been an incident. On 30 June 1919 the cable trams of the Edinburgh & District Tramways Company were acquired by the corporation which embarked on the electrification of the network. The first route to be electrified was inaugurated on 20 June 1922 and such was the speed of the conversion that the last cable trams ran on 23 June 1923. Almost all of the 200 acquired cable trams were converted to electric operation.
Alan Brotchie Collection.

A Leith electric tram at Bonnington Toll heading south on Newhaven Road, which became Pilrig Street on the south-eastern side of the crossroads. The road crossing at right angles, which would have been the route of the 1911 railless line, was Broughton Road to the left and Bonnington Road to the right. A toll bar cottage was erected at the crossroads around 1768 and survived until shortly after 1903 when the Caledonian Railway erected the bridge diagonally over the junction for its line across Leith from Victoria Park to Seafield. The bridge, just high enough for a tram to squeeze under when the road had been lowered by a few inches, dominated the junction until it was demolished in 1968 on the closure of the railway. (Historic details from the Threadinburgh website;)
Alan Brotchie Collection.

Glasgow TB35 (later re-numbered TBS1) was demonstrated in Edinburgh to delegates attending a conference of the International Association of Public Transport in June 1951. It is seen here in George Street outside Assembly Rooms (on the right) and the Rolls-Royce motorcar could be the Lord Provost's official transport. The tram on the left is in Hanover Street, on either service 23 or 27. Seen here and in the picture overleaf is one of the rather odd sign poles. They were generally used on passenger loading islands to indicate to the unknowing where these were and to carry some exhortation regarding tidiness or the deposit of used tickets. Their use in the middle of the street is believed to have been confined to George Street. *Ashley Bruce Collection.*

The strong objections from Leith resulted in the proposed projections into that burgh being omitted. This reduced the length of the northern route to 2 miles 7 furlongs. The Burgh Engineer stated that, but for the restricted clearances at Fountainbridge and across the canal bridge, a cable tramway along the central route, reduced to 2 miles 0 furlongs by the deletion of the projection into Leith, would have better coped with the densely populated route.

The southern route was revised to become a circular via Preston Street, Dalkeith Road, Lady Road, West Mains Road, Blackford Avenue, Marchmont Road and Melville Drive, with the branch from Blackford to Morningside deleted, giving a route length of 4 miles 4 furlongs. However, the Burgh Engineer considered that this route would be viable only if operated by motorbuses and pointed out that, passing through part of the finest suburban residential district in the city, it would attract opposition on aesthetic grounds. An alternative route from the foot of Marchmont Road to Cameron Toll via Melville Drive, Preston Street, Dalkeith Road and Lady Road (2 miles 1 furlong). However, at a further meeting of the committee on 2 October it was resolved not to adopt railless traction but to seek parliamentary powers to operate motorbuses instead. Six were introduced in July 1914 but were soon requisitioned for military use and it was not until December 1919 that the first regular service, between Ardmillan Terrace and Abbeyhill, commenced. (David Hunter, *Edinburgh's Transport*, and Tramway Committee Minutes, both courtesy Mike Mitchell, and *The Road from Arthur's Seat*, Gavin Booth, *Buses Annual 1984*)

Nevertheless, as stated on page 156, the corporation did seek parliamentary powers in 1919 for a short route between Hawes Pier and Port Edgar at South Queensferry. It may be relevant that Port Edgar was acquired by the Admiralty in 1916 for development as a naval base so the corporation may have been minded to provide a railless service for the workers there. However, the resultant Edinburgh Corporation Order Confirmation Act 1919 did not authorise the proposal.

It is perhaps not surprising that, with the opening of systems in London in 1931, Derby in 1932, Bournemouth and Huddersfield in 1933 and Portsmouth in 1934 (among others), a suggestion that trolleybuses should be used to meet the transport needs of people in the outlying districts of the city was among a number of motions submitted to the Public and Works Committee in November 1935 and remitted to the Transport Sub-committee for consideration. Proposals for opening several new routes and for cheaper fares were included in the motion but the matter progressed no further. (*Electric Railway Bus and Tram Journal,* 6 December 1935)

Proposals for a new tram network in Edinburgh were made in the 1990s and a plan to build a line from the airport, along Princes Street and Leith Walk to Newhaven emerged in 1999. By 2001 the proposal envisaged three routes all of which would have passed through the city centre. When the Scottish Nationalists came to power in 2007 they halted the project and considered introducing trolleybuses instead. However, following a lost vote in the Scottish Parliament, the SNP-led minority government agreed to resume construction of the line from the airport and through the city centre to Leith. Construction of the tramway was mired in controversy about delays and escalating costs. It eventually opened between the airport and the city centre on 31 May 2014 and to Leith on 7 June 2023.

Among the topics discussed during the four day conference of the International Association of Public Transport was fare collection systems and ticket-issuing machines as well as vehicle layouts to facilitate fare collection. The revolutionary "standee" design of TB35 made it an ideal vehicle to illustrate the passenger-flow concept and it became something of a celebrity trolleybus. It had already been exhibited at the Commercial Motor Show in London in September 1950 and demonstrated on the South Lancashire system on 16 January 1951. Here in George Street, some delegates share their thoughts about it. *Alan Brotchie Collection.*

The SNP decision to reassess the tram project and consider trolleybuses instead prompted a member of The Tbus Group to produce an information leaflet, which included this computer-generated image, to explain their advantages. *Ashley Bruce*

Page 159. Before the **Dundee** Tramways Committee meeting in August 1908 the Tramway Manager, Peter Fisher, had reported to the committee on 20 April the steps he had taken to ascertain the attitude of the Board of Trade towards the erection of overhead wires. On 4 May he reported further progress and his conclusion that the railless system was the most practical and cheapest means of serving areas where passenger traffic would not justify the laying of tram rails. At its meeting on 21 May the committee appointed a delegation of two councillors, the Tramway Manager and the Electrical Engineer to visit some continental installations to see the railless system in action. This party visited Monheim, Ahrweiler, Mülhausen and Wien in June and reported their conclusion that the railless system was well-suited for its proposed use in the city. Consequently, on 1st August the committee agreed to recommend to the council that Clepington Road should be equipped for railless operation. (*Tramway and Railway World*, 6 August 1908)

Doubts then began to emerge about the traffic potential for the line and on 21 September the council decided to drop the idea, thus denying the city of being the first railless operator in Britain. However, as already recorded, the committee further discussed railless matters in January 1909, leading in 1912 to the opening of the service along Clepington Road. (Alan Brotchie, *Dundee's Trackless Trams* as published in the 2010 edition of the Scottish Tramway and Transport Society's magazine)

Page 159. The proposed Footdee route at **Aberdeen** was suggested in January 1912 by the General Manager, Robert Stuart Pilcher, in a report to the Tramways Committee which made a unanimous recommendation to the Council that the railless system should be introduced. He said that two 28-seat cars, to be stabled at the Torry tram depot (thereby avoiding the cost of new depot accommodation), would be sufficient to operate a ten minute service at peak times and that a twenty minute service would be sufficient at other times. Based on figures he had obtained from Leeds and Bradford, he estimated the operating costs, including capital charges (and track renewal charges for the trams), to be 6.7d per car mile for the railless vehicles against 9.8d per car mile for trams. At the subsequent meeting of the town council, the committee's proposal was adopted by a large majority. (*Light Railway and Tramway Journal*, 19 January 1912)

Early in 1913, before the railless Bill was submitted to parliament, the corporation's Cleansing Committee gave some consideration to a proposal by the Superintendent of the Cleansing Department for the disposal of the city's domestic rubbish in a disused quarry at Cairncry. A fleet of three motor waggons with portable bodies was envisaged to ferry the waste material from three collection depots to the quarry. A further report, from the Tramways Manager, suggested the use of railless vehicles for this purpose although he also mentioned that petrol-electric vehicles, which had recently been greatly improved, might have advantages over railless cars on account of their greater mobility. The question of disposing of rubbish at sea was also discussed but was discounted because of marine pollution concerns and the inability to provide berthing space at the harbour for the barges needed. When the Aberdeen Corporation Bill was deposited in November 1913 it contained no reference to the conveyance of sanitary material. (*Aberdeen Journal,* 31 March 1913, courtesy Mike Mitchell)

Page 161. At a meeting of **Stirling** Town Council in February 1913 the Tramways Committee reported on the proposed improvement of the tramway system. This 3¼ mile horse tramway had opened in 1874 and ran between the town and Bridge of Allan; it was extended to St Niniams in 1898, adding another mile to the route. The British Electric Traction and National Electric Construction companies had both declined when approached about electrifying the line. The council decided that the Tramways Committee should encourage a company to come forward to electrify the system and that enquiries should be made as to the railless system. The Town Clerk was instructed to ascertain the experience of railless operation in those towns where it was already in use. In 1918 Stirling Corporation commenced motorbus operation in the town and the tramway closed in 1920. (*Light Railway and Tramway Journal*, 28 February 1913, and *The Directory of British Tramways*)

Chapter 12 – What Might Have Been

Page 164. Since publication of the book in December 2018 the discovery of some more suggestions and proposals for railless systems has changed the statistics given on this page.

In addition to the 112 Bills seeking trolleybus powers that were submitted to parliament there were a further 71 schemes that were given serious consideration and another 39 where the operation of trolleybuses was suggested but not pursued. Altogether, these proposals, if all implemented, could have eventually seen trolleybuses operating on the streets of 123 cities, towns and, in some places, villages. Indeed, trolleybuses did later operate in 24 of the towns and cities where earlier proposals were not fulfilled, as well as over parts or all of those suggested in London.

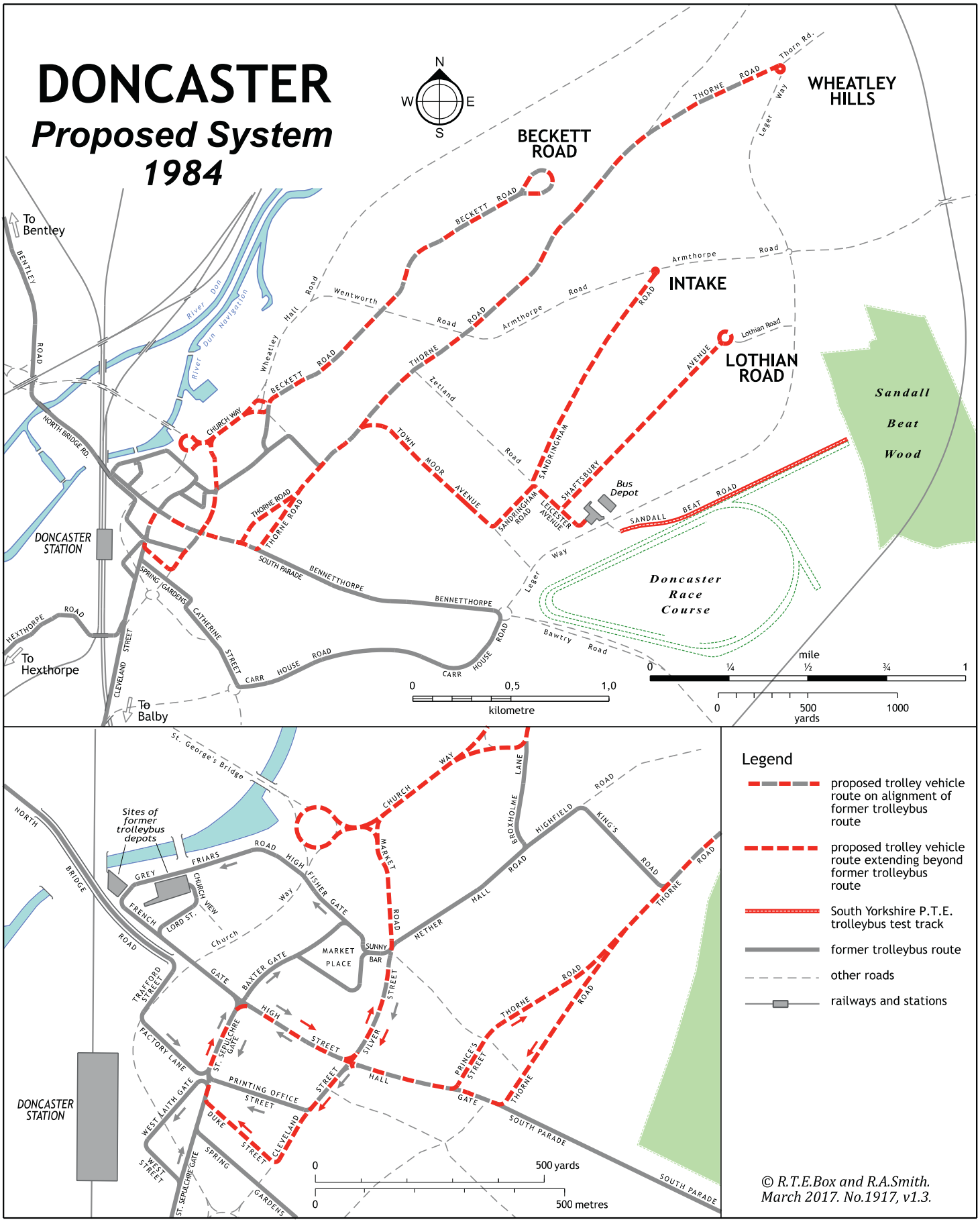
Appendix D – Proposals since the end of UK Operation in 1972

Page 179. After completion of the SYPTE trials in 1988 the demonstration line at Doncaster saw further use by WYPTE in 1989 and 1990; for these trials the trolleybus carried an "On hire to Yorkshire Rider" notice on its windscreen (visible in the picture). On a date that has not survived the passage of time bus operator Yorkshire Rider arranged to borrow the demonstration vehicle for a day to test its diesel-powered generator on some of the hills in Bradford. This test was not publicised but on the day before the test the BBC contacted Bob Tebb, who for many years worked to promote the return of trolleybus operation in the city, to enquire when the trolleybus would arrive. He immediately took the decision not to carry out the test under public scrutiny and cancelled it.

The actual date when the trolleybus scheme was terminated was 13 July 1990 owing to a new competing motorbus service on the Buttershaw route but it was not until February 1991 that the PTA formally confirmed this by announcing that the Leeds – Shipley – Bradford railway electrification scheme would take priority over the trolleybus scheme. (Bob Tebb)

Page 186 (page 187 in second print run). After the Neoplan duobus that was exhibited at Earl's Court in May 2001 had returned to Lausanne the Electric Tbus Group was in discussion with the Thames Gateway planners, and Kiepe and Neoplan about borrowing another of the batch for demonstration purposes at Greenwich Millennium Way and Shepherd's Bush. However, Neoplan was contracted to a strict delivery schedule and Lausanne would not agree to a variation that would have allowed another of the batch to visit London later in the year. Also, a cost estimate was produced of bringing a trolleybus to Leeds but it was too expensive for Metro, the West Yorkshire operator. (Ashley Bruce)

The South Yorkshire demonstration vehicle stands outside the former Doncaster Corporation Leicester Avenue motorbus garage, which became an asset of the newly-created South Yorkshire Passenger Transport Authority on 1st April 1974. *Bob Tebb.*



Page 179. Doncaster map added when the book was reprinted following the complete sell-out of the first print run.

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TROLLEYBOOKS

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