Journal

No. 63

September 2010

of the

The Roads and Road Transport History Association www.rrtha.org.uk

Belhaven

Roy Larkin

Robert Morton & Sons dates from 1879 in Wishaw, Lanarkshire. They were makers of machinery and wagons. In 1906, Belhaven Engineering & Motors Ltd., was formed to take over the wagon making side of the business, also at Wishaw.

An experimental steam bus was built in 1906 and a Morton steam bus ran between Glasgow and Eaglesham. Belhaven steamers used compound undertype engines and water tube boilers and were based largely on Lifu patents and designs. Both wagons and buses were built with the wagons mainly of 2-ton capacity.

The company took over the Allanton Foundry in 1907 and in 1908 began building taxi cabs with 2-cylinder Aster engines. In 1908 the first light lorries were built but these were dropped in 1910 when the company concentrated on heavier chain driven lorries, charabanes

and buses. Perth Corporation were users of the buses.

The production of steam wagons, which had always been small, was completely phased out by 1914 and the Great War years production was for 3-ton lorries for the War Office.

The relatively low production output meant these War Office lorries almost certainly only served on the Home Front with Local Auxiliary Motor Transport companies of the Army Service Corps.

After the war, production consisted of 3-ton chassis with 30hp petrol engines and chain drive with some receiving passenger bodies. The main customer at this time appears to be the Scottish Co-operative Wholesale Society and the United Co-operative Baking Society.



Belliaven 3-tonner, clearly showing the chain drive. Belliavens appear to only have been built as chassis/cabs. This one was supplied by their London agents, Coffield & Morton of Albemarle Street, London W1

The surplus of lorries flooding the market through the disposal sales at Slough proved to be too much competition for Belhaven and, in 1924, the vehicle building business was closed.

The parent company, survives as the Morton Machine Company, specialising in machinery for the baking industry.

President

Professor John Hibbs O.B.E.

Copper Beeches 134 Wood End Road

Erdington

Birmingham

B24 8BN

iabhibbs2@hotmail.com

Chairman

Grahame Boyes

7 Onslow Road

Richmond

TW10 6QH

g.boyes1@btinternet.com

Secretary

Peter Jaques

21 The Oaklands

Droitwich

WR98AD

pjaques@live.co.uk

Treasurer

John Howie

37 Balcombe Gardens

Horley

RH69BY

mygg37@tiscali.co.uk

Research Co-ordinator

Tony Newman

21 Ffordd Argoed

Mold

CH7 ILY

toekneenewman@googlemail.com

Academic Adviser

Professor John Armstrong

Thames Valley University

St Mary's Road

London

W5 5RF

Editor

Roy Larkin

19 Burnley Close

Tadley

RG26 3NQ

01189 817924

Roy.rrtlia@historicroadways.co.uk

Journal No. 63

Target date: September 2010

The 2010 subscription covers

Nos. 61 to 64

© R&RTHA and individual authors, 2010

Editorial

Welcome to the September edition of your Journal, which I hope you all find something to enjoy within its pages.

You will have noticed that the number of pages have reduced from the usual twenty to sixteen. This is entirely due to a lack of material.

You will also notice that there is a large content by myself. To be blunt, I simply do not have the time to produce the same amount of material for future editions.

I know many of you have promised me articles, or have contacts who have promised articles, but the time has arrived when those promises have to be converted to reality. If all the promised articles do materialise, your Journal is secure at twenty pages for next year and into the future. Without them, the December Journal may only have twelve pages, or possibly only eight.

I don't believe the Journal should be reduced, so if it does become necessary to reduce it further, not only is your membership devalued but it is my view that the continued existence of the Journal may have to be reviewed. Without your contributions, there may be no Journal, or at best only three per annum, or less!

Association Matters

September Members' Meeting

The next Members' Meeting will be held at the Coventry Transport Museum, Millennium Place, Hales Street, Coventry on 25 September at 11.00am.

The arranged speakers will be Tim Smith talking on 'Stoneways'; Roy Larkin, on 'Research and the Wider Picture'; Philip Kirk, on 'Research into North-East Independent Bus Operators' and Gordon Knowles on 'Surrey Roads'.

All members, and their friends who might be interested, are invited and the museum exhibits provide an added attraction. Your committee looks forward to welcoming all of you.

Contents

Belhaven	1
Centenary of the Subsidy Lorry	3
Development of the Transport Activity	6
A Day in the Life of a Tipper	8
Some Military Matters	10
Not in Service	12
News from 1912	12
Members' Forum	13
Book Reviews	14

Centenary of the Subsidy Lorry

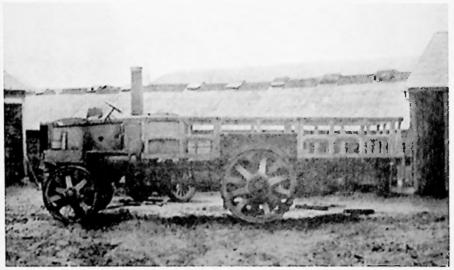
Roy Larkin

The 'Subsidy Model' lorry made its debut in 1910. Its significance is that it was the first purpose designed lorry for military operation. It also formed the mainstay of the road haulage industry in the immediate post-Great War period as thousands were purchased from Slough Dump by repatriated army drivers and officers who started their own transport business as an alternative to unemployment.

From the first War Office Trial in 1901, the Mechanical Transport Committee (MTC) had organised several further competitive trials and numerous trials with individual manufacturers. Leylands were tested around Leyland, Wolseleys were trialled between Birmingham and Leeds, while Thornycroft were trialled between their works in Chiswick and their new factory in Basingstoke from 1904. This close working with the manufacturers allowed both the manufacturer's developments and the MTC's ideas to be tried with both sides benefitting from each other.

the motor lorry was capable of and, more importantly, what it was not. Towards the end of the first decade, the motor lorry was proving itself in civilian use, but the MTC were acutely aware that wars weren't fought on civilian roads and that the needs of a civilian user were different to the military requirement. In 1910 they produced the specification they wanted for their own particular purposes.

The 'subsidy lorry' failed to find favour with operators, although the MTC remained undeterred, and a twelve page specification document was published on 1 July 1912, from which date only lorries complying with the subsidy specification would be eligible for the Subsidy Scheme. The two main objectives were 'to make the manipulation and control of all vehicles the same', and 'minimise the number of spare parts which must be carried in the field having regard to the number of different makes of vehicles of which the transport column of the army would be composed'.



Thornycroft 6-tonner powered by paraffin purchased by the War Office in 1905 as a long term trial for general service work - RLC Museum

The MTC had spent the decade visiting foreign trials, particularly the German and French trials, with the Italian and Austrian military trials and all the European motor shows visited. There appears to have been great camaraderie between the European equivalents of the MTC with a keenness to share information. All the MTC's were in the same boat. They were trying to develop and introduce the motor lorry into armies whose masters were from the horse age and largely sceptical of the motor lorry, which in fairness had done little to prove its equal, let alone superiority to the horse.

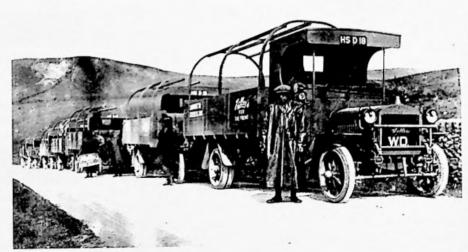
This close cooperation provided the MTC with great experience and knowledge and an excellent idea of what

The first objective was easily achieved. Accelerator, brake and clutch pedals had to be so arranged from right to left, the gear lever had to be on the right as did the handbrake which had to push forwards to apply it. The handle for operating the two sprags, which pivoted on the rear axle had to be on the left hand side of the steering wheel and 10 inches below the wheel's centre. A seat had to be fitted to permit two passengers alongside the driver. The reasoning was that any driver, many of whom would probably be inexperienced could drive any make of lorry, irrespective of the make

they had been trained on. The brake pedal had to be marked 'B' and the clutch pedal marked 'C' and pedals had to have no more than 3.5 inches of travel.

The second objective revealed a surprising naivety and was a total failure. It seems to have been assumed that the same specification would mean identical parts. Nobody appears to have realised that a gearbox, axle or carburettor from a Leyland would not fit a Wolseley, Dennis, Thornycroft, etc. or any other make than a Leyland despite all the manufacturers complying with the specification. It was however required that magnetos must have universal fittings, so it appears some consideration was given to universality of

components. The MTC provided a stringent specification, it was the responsibility of the makers to produce the design. In the early months of the Great War, this was a big problem with Army Service Corps companies having as many as twenty or even thirty different makes and models. By early 1915, the problem had been largely resolved as columns were organised into one or two makes. The nature of war meant that it was not always possible to maintain columns of single makes so the problem was never totally rectified, although ASC workshops became particularly adept at 'making parts fit'.



Halley 3-tonner Class A Subsidy Models. The sign on the front of the body side states 'Halley's for the Front'. The writing to the rear of the body states 'Load not to exceed 3 tons'.

The War Office specification framework on the body is clearly visible

There were two classes of Subsidy vehicle, Class A and Class B. Class A had to carry a 'useful load' of 3 tons and Class B a useful load of 30 cwt. It was noted that the body should not form part of the load. The gross weight of the Class A was to be no more than 7.5 tons and the Class B should be no more than 5 tons. Included in the gross weight were three men at 2 cwt each and spare petrol cans weighing 2 cwt. The total weight imposed on the chassis for Class A vehicles should be no more than 4.5 tons and 2.75 tons for Class B vehicles.

The design was required to allow for easy access to mechanical parts for repair in the field where 'conveniences such as inspection pits' would not be available. Attention had to be paid to the design to allow easy cleaning and protection against dust and water as 'the vehicles would be run in close convoy on muddy and dusty roads'.

The engines had to be vertical 4 cylinder petrol engines suitable for commercial petrol of 760 specific gravity. Class A engines had to have minimum RAC rating of 30hp with a 4.5in/110mm cylinder bore. Class B engines had to be minimum RAC rating of 24.8hp with 4in/100mm bore. Cylinders had to be cast in pairs and all valves had to be mechanically operated. Suitably sized inspection doors had to be fitted with as few bolts as possible for inspection of main bearings. Engines had to be capable of maintaining the maker's HP rating for a continuous 3 hours when run at normal speed.

All controls had to be rod operated, not wire, and governors set to no more than 1,000rpm were required. Ignition was to be by high tension magneto with a spare magneto provided for each vehicle. Leads were to be

coloured to facilitate correct connections. The cylinder nearest to the radiator had to be red, then green, then yellow with blue nearest the cab. There is no evidence to date that this colour coding was enforced, or even enforceable. Fuel tanks had to be 30 gallons capacity with standardised fittings, filters and caps. Engine lubrication had to be by a positively driven pump and the sump capacity had to be sufficient for 200 miles continuous travelling.

Gearboxes had to be 4-speed, preferably with a gate gear change. In top gear the vehicle should not be able to exceed 16mph and the vehicle should be reasonably quiet in all gears with the ratios permitting climbing a 1 in 6 gradient when fully loaded. The rear axle, usually referred to as the 'hind' axle had to be a live axle with bevel drive of approved design. The specification states quite clearly that chain drive was not permitted. However the terms of the Subsidy Scheme quite clearly allow for chain drive, though at a lower rate, with different values for enclosed or open chains.

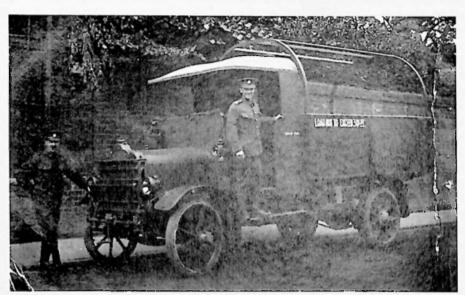
Wheel size had to be 1050mm x 120mm twins on the rear and 900mm x 120mm singles on the front for Class A and 1030mm x 100mm twins and 870mm x 100mm for the Class B. Ground clearance had to be a minimum of 12 inches with new tyres. Wider tyres were permitted provided the wheel centres remained the same and no increase in subsidy was expected. Non-skids had to be provided for each vehicle with ample space for their use allowed for in the design.

Two systems of braking were required. A handbrake to operate drum brakes on the rear wheels and a foot pedal to operate a brake drum on the propshaft. For class A vehicles a 1 gallon water can was required with the stop cock automatically operated by the brake pedal to allow

a drip feed to the transmission brake drum for cooling.

A complete tool kit had to be included with the vehicle and a range of spare parts. Manufacturers were required to keep sufficient spare parts in stock should they be called upon and to build their lorries to the same standard that they had submitted to the War Office for testing. Lorries not approved by the War Office were not eligible for the subsidy.

The Subsidy Model lorry was roundly criticised in the press of the day as being wholly unsuitable for the commercial user. It was too heavy, too expensive and too costly to run compared to the equivalent civilian lorries offered by manufacturers. Manufacturers were reluctant to provide manufacturing time for Subsidy Models at the expense of their 'civilian' range. All the criticisms were true, it was too heavy, it cost £950 against £450 and it was too big. The body was nearly 12 inches higher than the standard model, a factor that was particularly important when hand loading heavy sacks of flour or potatoes.



Daimler Class B 30-cwt. The writing on the body states 'Load not to exceed 30-cwt'

Valid as the criticisms were, they failed to recognise that the military had specified a vehicle to meet their own particular requirements. The MTC had little interest in what the civilian user needed. Those early principles of bigger, stronger and heavier compared to the equivalent payload of a civilian lorry remain with military transport to this day.

When war broke out in August 1914, the motor lorry was put to its first real test. ASC records reveal that the Subsidy Model was better suited to war time conditions than its civilian counterpart. It was more reliable on unmetalled roads and the extra ground clearance provided better off-road ability. The trade press conceded that the Subsidy Model lorry was more suited

to war time use than the civilian equivalent. The success of the MTC's specification can be measured by the numbers used. From an initial 80 lorries owned, not all of which were Subsidy Models, and 750 available through the Subsidy Scheme in August 1914, the War Office owned 65,000 Subsidy Model lorries in November 1918.

The war years proved to be a golden time for the manufactures as they strove to meet the War Office's seemingly insatiable need for lorries and spare parts. Established companies, such as Leyland, Thornycroft, Daimler and Maudslay expanded to meet demand and a plethora of smaller companies began manufacture without the need to design their own lorry. By producing their own detailed specification, the MTC had ensured any car maker or engineering company could build the lorry from MTC plans.

Just as the Subsidy Model lorry had been the making of many manufacturers during the war years, it proved to be their downfall in the post-war years. Thousands of

> lorries were repatriated by the War Office to be sold through the main disposal base, commonly referred to as Slough 'Dump'. Whereas in 1914 a new Subsidy lorry cost around £950, it became possible to buy a fully refurbished one in 1920 for around £500 from any number of garages and new enterprises set up to purchase by auction and then refurbish war surplus lorries. By 1925 the price had further dropped to around £200.

It wasn't until around 1926 that the affect of war surplus lorries began to diminish, partly through reducing

numbers, but primarily their dated design compared to the newer designs coming into the marketplace. The large manufacturers survived by purchasing their own vehicles back for refurbishment but many small manufacturers, such as Belhaven, Belsize, Palladium and McCurd could only struggle on for a few years.

War surplus Subsidy Model lorries provided the means for returning servicemen to buy a relatively cheap lorry with which to start their own haulage business in preference to the unemployment they otherwise faced. Numerous bus services were also started at the time using vehicles, notably the Ford T, from Slough. It might be an interesting exercise to explore in detail how large an influence returning servicemen had on the postwar growth of the haulage industry.

Development of the Transport Activity

A Historical Summary with Key Regulations John Hibbs

The early dates in this summary must be vague in the extreme and actual dates are clearer for regulation, which is very recent indeed. Regulation, however, will be seen to follow from the desire of governments to intervene, whether this has been necessary or not. The story is largely centred here in the United Kingdom and Western Europe.

The start

Homo sapiens appeared many tens of thousands of years ago, as the first 'hunter-gatherers' settled in family groups. In due course the practice developed of exchanging surpluses between families, and between tribes. Movement was on foot and values were agreed in the process. The objective was 'mutual satisfaction' and distances were not great.

Techniques

It is very hard to determine the order in which technical improvements were made, but the use of donkeys or mules, and horses to some extent, made bigger loads and greater distances possible. Oxen were also used. Where rivers, or the sea, were available canoes and then boats were invented. Two major developments, neither of which can be dated, were the invention of the wheel and the use of sails. The spoked wheel was later a significant improvement. Trackways developed and harbours were used, though we do not know when the 'green lanes' started to be used for driving livestock. We do not know when money was invented, enabling the benefits of exchange to be defined.

Cultures

In due course tribes became more important, rulers took charge of larger areas and languages started to differ. 'Nations' were beginning to appear. Over the west coast of Europe, this led to an increasing use of coastwise shipping, with the exchange of gifts between leaders and the growth of trade, from Iceland to North Africa. Castles were built and towns and cities grew around them with the need for transport of commodities and to bring in food. Wars meant armies marching over greater distances, preying on the communities for food. Churches and cathedrals, then mosques were built and attracted people. In the Middle East, great civilisations came and went, leading to the Greek and Roman cultures.

Movement

The use of the wheel made animal power important for

movement of goods, but much still went by packhorse or the equivalent. The better off rode on horseback. Sailing ships meant greater distances were possible. Yet roads were slow in coming. The Roman Empire built straight roads over long distances, but mountains remained a barrier. Over Europe and the Middle East, as elsewhere, movement was still local. Over Europe, tribes slowly began to settle down and nations appeared but wars continued.

Trade

In England, the Norman Conquest of 1066 saw a settled period and market towns grew, requiring better access for goods and people. Rivers were bridged, sometimes with tolls, sometimes by religious order. A clearer pattern of roads grew with green lanes remaining. Cities and ports became steadily more important, but their size was limited by the distances people could walk. This spread over Scotland and Wales and later Ireland. There were civil wars but then the 'Tudor Settlement' gave the country a period of peace and private coaches appeared for the wealthy.

Control

Regulation started many years later, but control came early. Justices set a fair price for the movement of goods. Only the rich, and the military, travelled any distance and the common people were expected to stay within their town and city boundaries. Much later this was still true in much of Europe, notably Germany and Spain, where permission had to be obtained before buying a railway ticket.

Infrastructure

Roads were expanded over the centuries and iron rails came into use where coal was carried from the pit to the ports in northeast England. Elizabethan highway laws made the parishes responsible for road construction and upkeep. The highway is a right of passage, at Common Law it is still 'a path over which all members of the public may pass and repass for business or pleasure'. It is the property of the landowners on each side but there is not much they can do about it, unless they have built the road itself. Turnpike Roads appeared around 1750; loosely controlled and easily avoidable by local traffic, but road surfaces were improved, at a price. By the early 19thC, canals were established, following the invention of the lock, applied also to rivers. They were costly to construct, requiring a special act of parliament to ensure limited liability and attract investors.

Traffic

Around 1625, the Hackney Coach lowered customer prices by carrying more people in one vehicle. The name seems to have come from London, where horses were reared in Hackney. In about 1650, Stage Coaches were introduced, operated on regular days. You paid your fare in advance at the public house where they started their journey and this was written down in a book. Hence the term 'booking office', which we still use. Short Stage Coaches later linked towns in areas such as the Midlands. As roads improved, journey times became shorter. Control was very limited. In 1784, the General Post Office introduced Mail Coaches, carrying fewer people at higher fares and with exemption from charges at tollgates.

Railways

Then the trains came and changed everything. The canal companies cleaned up their act, and kept goods movement for a century, because so much industry was sited by them. Stage coaches could not survive the competition and turnpike roads disappeared. But the real change came from regulation. Putting steam locomotives on rails was one thing, but building a new railway meant investment and shareholders demanded limited liability for such a risky business. That meant going to parliament, which took its responsibilities seriously and started increasingly to interfere.

Change

As we have seen, the railways changed everything. Beginning in 1840 with the Railway Regulation Act, parliament took a rapidly growing interest in railways. Gladstone's Regulation of Railways Act of 1844 required 'parliamentary trains' with cheaper fares. It provided for nationalisation after twenty one years, which was never made use of. Railway and Canal Traffic Acts followed in 1854, 1871, 1873, 1888 and 1894, imposing increased control of the companies, extending to rates and charges and finally, classification of merchandise with maximum rates. Perceived as a monopoly, in 1911 a Departmental Committee considered mergers and in 1913 defined the aggregated net revenues of the industry.

Other modes

The coming of the railway ended the stage coaches and the Turnpike Trusts, and responsibility for the roads was passed to local councils. In 1849 the Navigation Acts were repealed, opening up merchant shipping but leading to 'coffin ships' sent out unsafe in order to claim insurance after loss. Legislation to deal with this practice was required, demonstrating the importance of safety regulation in transport. Omnibuses appeared in London in 1829, followed by the Stage Carriage Act of 1832 and the Town Police Clauses Act of 1847, which

gave licensing powers to local councils.

Control

In 1919, Sir Eric Geddes persuaded Lloyd George to place a Bill before parliament to create a Ministry of Ways and Communications which provided for government control or ownership of the railways, light railways, roads, docks, harbours and shipping, electric power, tramways and road vehicles. While Geddes did not get his way, he became the first Minister of Transport with much reduced powers. This was the first time parliament was asked to create a new Ministry. His ideas came to influence transport legislation thereafter, and they remain commonly held today.

London

In 1922, the poor quality of service by the London General Omnibus Company brought a 'pirate' bus company on to the streets. This was followed by many others, and London General ended its protection of tramways owned by the combine and threatened the wages of its drivers. There was a strike and Ernest Bevin threatened to call the tube drivers out as well. The pirates kept running. The wage levels were restored, but in 1924 the London Traffic Act gave a monopoly on its routes to operators and the majority of independents sold to a new holding company, linked to the London General. In 1933, the London Passenger Transport Act set up a London Passenger Transport Board, to own all street and underground operations in the capital.

Elsewhere

The first motor-bus service started in Edinburgh in 1898. The first all-year long-distance coach service started between London and Bristol in 1925. As territorial companies developed, Thomas Tilling and British Electric Traction interests clashed in south-east England, leading in 1916 to the formation of the cartel. In 1928, the Railways (Road Transport) Acts gave official blessing to the bus operations of the Four Main Lines. An agreement was reached with the cartel, permitting railway ownership of no more than 49% in the cartel companies. Many smaller firms then sold to the cartel. Following the Royal Commission on Transport of 1928-1931, parliament passed the Road Traffic Act 1930, before the final report of the Commission, which gave monopoly rights with safety and price control, to all operators' services. Still more sold to the cartel. In 1933 the Road and Rail Traffic Act restricted the freedom of road freight transport operations.

Nationalisation

The Transport Act of 1947 set out to apply many of Geddes' policies to the industry. The British Transport Commission (BTC) was set up to own the railways and

London Transport and to acquire the bus companies, and road freight firms operating more than 25 miles from base. Own-account firms and many specialist firms were exempt. The railways continued to lose freight and passenger traffic becoming effectively bankrupt, being bailed out annually by the Treasury. The Transport Act 1953 and subsequent legislation had returned the road haulage business to the market by 1969. The Transport Act of 1968 introduced the EU Operator's Licence. The National Bus Company and the Scottish Bus Group acquired the state-owned bus companies, but the new Passenger Transport Executives took over bus operation in what were to become Metropolitan Counties in 1972.

Motorways

The first motorway, the Preston By-pass, was opened in 1958. They were intended to encourage industry, but they were followed by steady growth of car ownership, to include all levels of society. Neither bus nor rail management seemed to be concerned. In particular, the nationalised bus companies took advantage of underfloor engines to operate larger vehicles at reduced frequencies and removed conductors, losing still more traffic to the private car in consequence.

Reforms

The Transport Act of 1962 abolished the BTC, removed the railways' 'common carrier' obligations and wrote off £475 million of their debts. Price control was removed. In 1963, Dr Richard Beeching commenced the Reshaping of British Railways; by the end of 1964, productivity had

increased by more than 26%. Beeching saved the railways from a progressive decline, which would have had the same outcome as in the USA. In 1968, the Transport Act removed a further £1,236 million of railway debt, which reduced still further in 1974.

Privatisation

The Transport Act of 1985 abolished the route monopolies of the 1930 Act and ended price control of bus services. The PTEs were required to sell their bus services and municipal operations were transferred to private companies owned by the councils concerned. The NBC and SBG were wound up and their companies acquired independence, followed by the re-appearance of the cartel, with no written agreement this time, due to competition law. The majority of the municipal companies were acquired by other firms. Many territorial boundaries changed. The Railways act 1993 privatised the system, setting up passenger franchises, with track, terminals and signalling transferred to Railtrack PLC, which in 2001 became Network Rail.

Summary

Transport activity is as old as human settlement, but it developed vey slowly over a very long time. The railway made a major change in the pattern and with the railways came regulation. Then came Geddes, the logistician, who thought all transport activity was a utility, best owned and managed by public authority. The 21stC has seen a return to his ideas, with greater interference and managers have lost more and more freedom to innovate and to accept risk.

A Day in the Life of a Tipper

Ken Swallow

You could say that I was numerate as a child - except that in my case the description means that anything that moved and had a number had to be collected. The same applied to the names of ships and the registration markings of aircraft. All had to be diligently recorded.

Adventure to me was overcoming the hazards of bunking the local engine sheds - and in the case of Edge Hill, sometimes being thrown out. School holidays meant buying the *Journal of Commerce* and then spotting most of the 90-odd ships in port from the Overhead Railway. Or they meant doing the rounds of the local tram depots. Aircraft needed spotting, sometimes incurring an element of risk in negotiating a route past the security police at the airport, not always successfully. So it was hardly surprising that with my father being chief clerk in the transport department of the Liverpool Gas Company an interest had to be taken in that company's fleet, and that it should be a household requirement that I be notified of the arrival of each new

vehicle and provided with its details. The fleet numbering system, if I recall correctly, picked up at no.69 with post-war fleet renewal and continued in sequence from there. I could never understand, as a devoted collector of Crosville numbers (what bliss!), why my father was unwilling to appreciate my efforts to persuade him to renumber the Gas Company's fleet with what would seem to me to be a more intelligent arrangement than merely adding the next number. At least, however, they had names, given to them by each regular driver.

But the Morris Commercial 5-tonners, and the Fordsons that followed them, were small beer to me compared with what arrived in 1949 - a Leyland. A Leyland truck was to be taken seriously, just like Leyland buses, which were themselves inevitably an important part of my interest, an interest that was now to be thus suddenly greatly enhanced. So when the chance was given me at age 14 to spend the best part of a day riding on this



The Comet articulated outfit with Dyson end-tipping semi-trailer. - British Commercial Vehicle Museum/Leyland Journal

newcomer, destined as it was to be unique, I needed no encouragement. Even though its day's work involved 30 round trips of a mere 1.2 miles between the two parts of the Linacre gas works, in Bootle, loading coal at the north end works and delivering it to feed the retort house at the south end.

The Linacre works had been supplying gas to Bootle and Liverpool, from the early 1860s. It was adjacent to the Leeds & Liverpool Canal, and along with the Tate & Lyle sugar refinery it was one of the last major users of the canal for commercial transport (the last was actually the nearby Athol Street gas works in 1968, by which time both works had converted to hydrocarbon feedstock which was delivered by pipeline). Most of the coal for the Linacre plant was originally delivered by barge from the Wigan coalfield and in an aerial view reproduced in the May 1933 Gas Journal a dozen barges can be counted alongside the south works - some coal still came this way as late as the 1960s. Steam cranes off-loaded the coal from the barges to a stock pile, when it was shovelled into carts and conveyed to retorts.

Later a short (0.56 mile) single-line branch was opened to the north works from a branch from the Midland Railway's Bootle Branch and along this, crossing over Hawthorne Road and the canal, came coal from other sources, in particular the South Yorkshire coalfield. From this branch coal was tipped into overhead bunkers feeding a conveyor belt, which in turn fed the retort houses at the north end of the works but also into other bunkers designed for overhead loading of road vehicles. To supply the railed coal to the south works, vehicles of around 6-ton capacity were hired to take the coal from the overhead bunkers to a grid at the south works to be

tipped into a hopper from which a conveyor belt fed the south retort houses. The rail link closed in 1968.

It was to replace these hired vehicles that a Leyland Comet, KKD 982, was delivered to what by May 1949 had become the North Western Gas Board - Liverpool Undertaking. It was an articulated tipper with a semi-trailer provided by the Liverpool manufacturer, R A Dyson & Co Ltd, designed for a pay load of 10 tons - in practice this varied from 91/2 tons to 11 tons according to the type of coal and whether it was wet or dry. Tipping gear was provided by Edwards Bros (Tippers) Ltd, of Bolton, (Edbro) permitting an angle of tip of 50 degrees. In spite of the amount of tipping involved and the shortness of the hauls, the Comet showed a fuel consumption of

8.3 mpg. The smaller vehicles the Comet replaced had been doing the work at around 6d to 6½d a ton, but using the Comet had brought this down to 4½d, with the possibility of further reducing this to 3½d when the capacity of the conveyor belts had been increased to equal the new vehicle's capacity to deliver. My recollection of the short route taken by the Comet between the north and south works is vague but it need not have been along any public roads as direct access between the two was possible.

If it was ever explained to me on that happy day that on the basis of an 8-hour day, seven days a week, delivering an average of 10 tons 5 cwt of coal each trip, taking 13½ minutes per trip (that would be five to six minutes on the road and seven to eight for loading and unloading), the Comet was handling 2,150 tons a week and would recover its capital cost in something like two years with depreciation on the basis of a 12-year life, I doubt it would have impressed me, for maths was never my strong point - you didn't need it to be a spotter. I had just been content to spend a large part of that 8-hour day riding up and down, or rather north and south, in a proper truck.

By the way, I don't seem to have a note of its fleet number.

Reference: *Leyland Journal*, Vol 10 No 1 January 1950 pp14-16

My thanks to John Horne (who worked at Linacre for a time) and to Bill Aldridge (both members of the North West Gas Historical Society) for their help in reinforcing some vague memories.

Some Military Matters

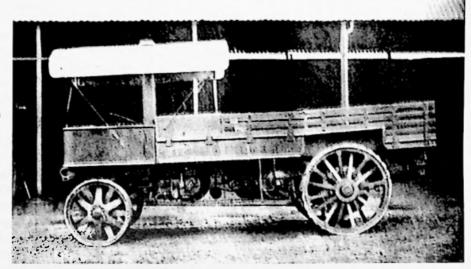
Roy larkin

Tony Newman raised some interesting questions in his review of Destination Western Front (J62). Particularly, the connection between the War Office subsidy schemes and the Liverpool Self-Propelled Traffic Association's Trials in the late 1890s and the assumption that LGOC B-types were classified as Class B (30-cwt) for the subsidy scheme.

During the Boer War the War Office had established the Mechanical Transport Committee, comprising members from the Royal Engineers, who were

responsible for the steamers used in South Africa, the Royal Artillery, and the Army Service Corps with Col. C.E. Heath and Lt.Col. F.T. Clayton as the ASC representatives. Four sub-committees were established within the MTC, being Experimental, Royal Artillery, Royal Engineers and Army Service Corps.

The link to the Liverpool Trials is tenuous. It is known that that War Office sent an 'official observer' to the trials, though it is not recorded whether by invitation of the trial organisers or at War Office request. Neither has it been established whether it was an MTC member. To date, no record of the observer's report has been



40hp, 6-ton Wolseley lorry trialled by the War Office in 1905 - RLC Musem

discovered but the first War Office Trial in 1901 followed closely the principle of the Liverpool trials, although was modified to suit military rather than civilian criteria. Numerous War Office trials followed through to 1914, which were organised and evaluated by the MTC.

In 1902 a subsidy scheme was first discussed as a means of providing a reserve of motor lorries that the Army could call upon in times of national emergency. This appears to have originated with the War Office, rather than the MTC, as it became bogged down with bureaucracy and was finally abandoned some two years later as it still hadn't been finalised and somebody

pointed out that there were not enough motor lorries in existence to make any scheme worthwhile.

By 1908, development of the motor lorry had progressed rapidly, as had civilian ownership and a renewed attempt at a subsidy scheme was introduced. This was probably at the War Office instigation, with MTC input, although comments by the MTC, in particular, and the War Office suggest the final outcome was in the hands of the Treasury. Both the MTC and War Office complained that the level of subsidy was too low to encourage owners to take advantage of it.



LGOC B-type 30-cwt. 3752 is the WD number and the painted out LGOC fleet number can be seen as B2511 showing it as one of the omnibuses that had the body replaced with a general service body.

By 1910, the MTC had conducted enough trials to have an understanding of what the motor lorry was capable of, and more importantly what it wasn't. This led to the MTC specifying their own motor lorry to suit the purpose of the military, rather than a civilian lorry that might serve the military's purpose. As a result, the subsidy scheme was further evolved to suit this military vehicle which would be produced by civilian manufacturers. The problem remained of the value of the scheme being too small to encourage owners to make use of it.



Chain driven Commer Cars 3-tonner

It has to be remembered that the motor lorry was as yet unproven in military terms and that while the MTC were enthusiastic, the largely horse orientated War Office still needing convincing. The Treasury, as today and through the ages, didn't have a bottomless pot of gold and any scheme for an unproven mode of transport that wasn't actually needed at the time would have been difficult to justify.

Put simply the subsidy scheme was for Class A (3 ton) and Class B (30-cwt) vehicles, although there were subdivisions within the two classes. The LGOC B-type is assumed to be a Class B vehicle. The War Office trial held in August 1912 included omnibuses for comparison, not competition, with various makes of Class A and Class B lorries. The MTC report of the trial reveals that the omnibuses were presented with what the MTC considered was an over-optimistic load. This load of sandbags was gradually reduced until a 'useable' payload was reached, which is recorded as 30-cwt.

Unit Histories of ASC companies operating abroad rarely mention individual makes of lorry. Unless the Commanding Officer had an interest in motor lorries, which most didn't, the lorry was simply a tool and the make of no more interest than the name of an individual horse. Only if a particular make performed especially well, or badly, does the manufacturer get mention. However, several companies do single out the LGOC for comment. Always the CO is bemoaning the fact that he had a company of LGOC 30-cwts. It seems the 30-cwt didn't have quite the same kudos as a company of 3-tonners.

The only vehicle register I have discovered to date is the 2nd Echelon Company Register – Vehicle and Personnel Register. This appears to have been formed in the 1916 reorganisation as it has vehicles drawn from other serving units, notably the 2nd Indian Cavalry, GHQ and some drawn from Avonmouth. The company consisted of Daimlers of 35 cwt, 2 ton, 50 cwt and 3 ton 'useful load' and LGOCs, which are listed as 30-cwt useful load.

W.D.	VA.	t setal Lord 2 ten et 20 cm l.	Chastie		Lineine		Pront				* Moretvel	
			Type	Samter	Cope	Sumilar	Wheel Centre	Nice	Whar! Centre	Nine	From	Date
्ड ७ ४७७५	Daimee	o Ton	13	s-roq	rs.	15056	660	150	680	I Giro	e u o	25 %.
184 184	LGUC	LO Gwi	rs.	አቴሪ፣	G)	14 to 7 #	71.1	920	8 60	100	INPORT CORPS TROOP WOR CO.	b /íu
158	لـ د ت د	Ba Cws	С	2416	PO.	Mya	441.	9 & O	40	tem temp	Inn Cas Coans Tases Sun Cas	٠ %،

Extract from 2nd Echelon Vehicle and Personnel Register showing details of Daimler and LGOC load capacity.

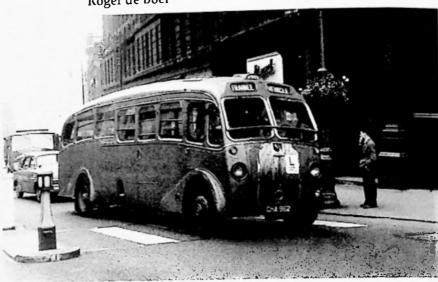
Not in Service

Roger de Boer

Because I always liked older buses I sought non-PSVs. Most commonly encountered in the 1960s were those found in the fairground. Used for towing caravans or the rides themselves, their engines were deployed as generators to maintain the lighting.

When the fair came to town, I made a bee-line for the back and the perimeter where the ex-buses formed a wall enclosing the sideshows and stalls. Here I learned a lot about vehicle registrations and badly painted over fleetnames were revealed by looking at an angle and their registrations showed their place of origin.

There seemed to be no end to the re-uses of old buses. A double-decker Sunday School, a church in the Netherlands, which comprised two Ford buses with a tent straddled between them. Trolleybuses used as toilets at Southend-on-Sea were found in 1968, possibly from Epsom Races?



CHA 962 used in semi-retirement as a driver training vehicle

Hedge-clippers and mobile offices, DHA 648, AHA 527 were found with Midland Red, with CHA 962 and CHA 965 used as SLR driver trainers which were once a familiar sight at Bearwood. DHA 719 became a watchman's hut at Benacre Street and moved to Adderley Street in Birmingham.

News from 1912

from the pages of Commercial Motor, 1912

Motorvan Lights

A driver was summoned at the Worthing Petty Sessions for leaving his motor pantechnicon standing throughout the night without lamps being lit. The driver was fined 10s for the absence of lights and 3s 6d for obstruction.

A few more cases of this kind are all that is necessary to bring about the necessary night-storage facilities in all parts of the country, which we have so often urged as being of vital importance.

Wood Tires for Treacherous Surfaces

We learn from Mr J.H. Knight, of Barfield, Farnham, Surrey, that his wooden tires, for use upon soft and wet ground, or over sand, where the ordinary rubber tire cannot get a grip, have stood up splendidly to a recent series of tests. Although a little unsightly, these tires have proved to run when under load and not to wear out quickly. The Knight wooden tire is, of course, of a type which will scarcely come into general and everyday use, but there are nonetheless great possibilities of application for it. (Note the spelling of 'tire', which was the norm prior to World War One. It wasn't until the early

1920s that 'tyre' became the normal spelling. - RL)

The Economy of Tar Spraying

The committee appointed in 1903 to consider the question of the materials and means of paving the streets of London has now issued its 9th annual report. It is said that the principle kind of paving laid during 1911 was creosoted soft wood. The concrete foundation varies from 6in to 9in in thickness in different London Boroughs. The most striking feature of the return is the saving which has taken place in connection with the tarspraying of macadam roads, and the cost of scavenging, watering and maintenance. In Wandsworth, the expense of these services prior to tar-spraying some four years ago was £96,035 per annum. This has now been reduced to £62,760. The cost of four years' tar-spraying was £6,7321.

For Sale

12-20hp Benz delivery van, suit laundry, smart, reliable and all in perfect condition. £50. Stevenson, Lauriston Road, Hackney, London, N.E.

Members' Forum

from Garry Turvey

Sir Peter Baldwin KCB

Members will be sorry to learn of the death of Sir Peter Baldwin, who died on 9 May 2010 at the age of 87. He served in the Civil Service for 40 years and he was the Permanent Secretary at the Department of Transport from 1978 to 1983. More recently he was the vice-Chairman of the AA and Chairman of the Motorway Archive Trust. It was in that latter capacity that he addressed the R&RTHA Conference in Derby in 2004. Members who were present that day will never forget his stimulating and thoughtful contribution which set the vital role of the motorways within the context of transport's overall and massive benefit to the community.

from Peter Jaques

I am grateful to Peter Jaques for bringing to my attention the following typographical errors that crept into his and Christopher Davis' article, 'Leicester Green and Midland Red' in Journal 62.

Fleet No. 60 RY 8686 should read RY 8687.

Notes: BC 9190 should read 'Ch15' body (Ch stood for

charabanc)

Notes: RY 4519 should read G.H. Maude, Barnard Castle 8/3/37; later Mrs S. Brown (?showman), Winchester and

last licensed 11/47. Disposals: HS 4280 should read HS 4208.

from Bob Rust

With regard to David Stewart-David's article, 'Road Transport in Hull', (J62):

When I started in road haulage in 1955 there were still a few women lorry drivers from Hull (some on eightwheelers) particularly 'on the fish'. It was a story in the road haulage industry that, throughout the war, Hull had the largest number of women lorry drivers in the industry. It was always the story that the young men were either in the forces, mainly the Navy, or crewing the trawlers commandeered for mine sweeping while the older men crewed the trawlers that were still fishing. This left the women to support the town's main industry. Funny there were never similar stories about Grimsby or Fleetwood where the same situation must have prevailed.

from Paul Lacey

I would be grateful if you could include the following

item in the next journal. You can give my email address, paul.lacey3551@btinternet.com, for response, or my home address at 17 Sparrow Close, Woosehill, Wokingham, RG41 3HT.

I-las anyone come across James Augustine Davies prior to his involvement with Newbury & District MS from early 1934?

He had been born in Ireland in 1895, but the family was at Leigh in Lancashire by 1911. He served in Royal Engineers in WW1 and married Alice Chadwick in 1927, again in Leigh. According to family sources, and also his own write up at the time of his retirement from Guernsey Railway, prior to going to Newbury he had considerable experience in the road transport industry (and even a spell as a bus conductor) - though all those sources do include some inaccuracies.

Any information covering the years between the end of the war and 1934 most appreciated.

from Dave Bubier

(Thomas D Quincey, Confessions of an English Opium Eater, 1853)

All the mails in the kingdom in those days (1802) were so arranged as to reach London early in the morning. Between the hours of four and six, one after the other, according to their station upon the roll, all the mails from the N(orth) - the E(ast) - the W(est) - the S(outh), whence, according to some curious etymologists, comes the magical word NEWS, drove up successively to the Post Office and rendered up their heart shaking budgets; none earlier than four o'clock, none later than six.

and:

Andrew Waller asks about Lancashire Motor Traders. (Members' Forum, J61) There was a considerable correspondence on this subject within the Omnibus Society (Provincial Historical Research Group) Newsletter in recent years. Members of the Whitehead family, who owned LMT from the post-war period, also separately purchased Ivory Coaches of Tetbury and Portsmouth. Rees & Williams of Tycroes was also more distantly connected. Dealers often pre-registered vehicles prior to sale and some operators actually preferred a 'foreign' mark on their vehicles as less dateable (under the old number plate system) than the local one. Those in the know could often identify the supplier from a dealer block registration.

from Roger Benton

from THE SHEFFIELD AND ROTHERHAM ADVERTISER, Friday, January 21. 1887.

RUNNING DOWN A STREET PIANO

A the Sheffield County Court, yesterday, before his Honour, Judge Ellison, an action was tried in which Angelo Sarons, the proprietor of a street piano, sued the Upperthorpe and Steel Bank Omnibus Company for £16 damages occasioned by the negligence of one of the company's drivers. Mr. W.E. Clegg appeared for the plaintiff: Mr. Ellison (instructed by Messrs. Smith, Smith and Elliott) for the defendant.

There was a considerable muster of the organ-grinding fraternity, and the case excited considerable interest amongst others in court, the interest being heightened by the fact that the plaintiff could not speak English, and one of his compatriots had to act as interpreter. The plaintiff's case was that on the night of 30 October, about half-past nine, he was with a companion, playing the piano in Trippet lane, when the Steel Bank Omnibus, coming down the lane, caught the plaintiff's cart and upset the piano, the result being that the shaft of the piano cart was broken, and the piano sustained 'severe internal injuries'. The piano had to be sent to London for repairs, and the plaintiff's claim was made up of £13.6s.6d for the repairs, 18s.6d for carriage, 4s6d for the broken shaft, and £1.10s.6d. for temporary loss of employment. According to plaintiff and his witnesses, the piano was drawn up close to the footpath on the offside of this road as the 'bus was then going, and there was ample room for the 'bus to pass, as well as plenty of light from the Red Lion public-house and neighbouring shops.

Antonio Botta, the manufacturer to whom the piano was sent for repair, was examined at some length as to the nature of the 'internal injuries', and explained that as the piano was being played at the time of the accident the damage was increased, many of the pegs in the barrel being broken. He estimated the value of the organ before the accident at £9, and after the repairs at £25, because a new set of tunes was put in, but he said it would have cost as much to put in the old tunes, as the barrel was unrepairable. The defendant's case was that

there was no negligence on the part of the driver, who was exercising due caution, in a dark and narrow thoroughfare, and that the plaintiff and his companion were guilty of negligence, it being alleged that they moved the piano after the fore part of the 'bus had passed, so that the shaft of the piano-cart caught the hinder panel of the 'bus. The driver and conductor of the 'bus were called, but his Honour held that the plaintiff's version of the accident was conclusively proved, and that the only question was one of damages. The evidence being that the value of the damaged organ was only £9, he considered that the damages claimed were too high, and gave judgement for £10.15s with costs.

from Grahame Boyes

Conditions of Carriage - Amendment to the Companion to British Road Haulage History

Further information has come to light on the introduction of standard conditions of carriage for general haulage. It is now known that this happened during the Second World War, rather than in the 1950s as previously supposed.

The second and third full sentences at the top of the right-hand column on page 101 may therefore be amended as follows:

However, this groundwork no doubt helped the Ministry of War Transport in the early years of the war to issue conditions of carriage restricting liability to £200 per ton, which became generally adopted by the industry. They were superseded in August 1946 by conditions produced by the Road Haulage Association, which its members were recommended to use, either unchanged or adapted to suit their particular businesses. The Road Haulage Executive's conditions, issued in January 1951, extended to 37 clauses, covering such details as...'

The source for this is PRO, AN 54/2, Road Transport Executive, Freight Charges Committee, Report on Conditions of Carriage, 11 June 1948.

Book Reviews

SELNEC - a 40th Celebration... D. Scott Hellewell

Venture Publications Ltd, 128 Pikes Lane, Glossop, SK13 8EH

ISBN 978 190530 4332

80pp A4 soft back with laminated card covers £9.95.

The South East Lancashire and North East Cheshire

P.T.E., usually referred to by its acronym SELNEC, is not an operator which immediately springs to mind as needing a history to be written. It existed for less than five years and is now somewhat overshadowed by its Greater Manchester successor but this is precisely the reason to welcome this book. It is to be recommended for placing on record a summary of the extensive changes which took place during that short period.

The book is primarily a photographic record, in full colour throughout, with extended captions. There is a brief background sketch and a welcome list of the various directors and principal officers is given, something all too frequently neglected in many publications. Under 'Selnec's Inheritance' details of the acquired operators are included as is a summary of the fleet renumbering scheme. Photographs of the acquired operators' varied liveries give us an excellent snapshot of what was to be lost under a deluge of orange and white.

The local train services which came under the SELNEC umbrella are detailed and illustrated. Other sections touch on fares and route numbering; on the experimental vehicles purchased with a view to deciding future fleet policy; coach operations, the negotiations with the National Bus Company leading to the acquisition of most of the North Western Road Car company and the agreement with Lancashire United which included an option to purchase that business.

Peter Jaques

Mechanical Horses Bill Aldridge

Venture Publications, 128 Pikes Lane, Glossop, SK13 8EH ISBN 978 190530 4318 96pp illustrated £13.95

The term 'Mechanical Horse' was first coined by Scammell Lorries Ltd in the 1930s as the model name for their 3-wheeled motive unit developed from the Napier concept as a replacement for the horse for urban deliveries. The term passed into generic use, like Hoover or Biro, to cover all subsequent 3-wheeled tractors. Bill Aldridge, expands the term to include all vehicles with the Scammell type automatic coupling, which brings more modern urban articulated vehicles into the scope of this publication. Bedford TKs, Ford D Series, Morris Commercials and Karriers amongst others provide a balanced and varied standpoint, though naturally the Scammells dominate the pages. The story of the Mechanical Horse is therefore told from inception to the last known use in 2000 by a Newhaven furniture company.

The text is informative and supplemented by lengthy captions to the excellent and numerous photographs, many of which are from the Scammell archives. One small criticism is that block pages of photographs are placed mid-chapter and I found myself turning pages searching for the text to continue. Where known, some detail as to the company who owned each vehicle is given and the influence of the railways is discussed. Although generally known as the 'Scammell Automatic Coupling' the system was by no means exclusive to

Scammell with trailer companies such as BTC, Hands and Taskers producing compatible systems. When Scammell made the coupling available to manufactures for fitting at the build stage, thus negating the need to take each vehicle to Watford for its fitting, the range of different makes was seen to multiply.

The Mechanical Horse revolutionised urban deliveries and Aldridge has done an excellent job in telling and illustrating the history of these vehicles including the changes in legislation that influenced their design and was eventually responsible for their demise.

Roy Larkin

The Corporation Bus Ken Houston

Grosvenor House Publishing Ltd, Crossweys, 28 -30 High Street, Guildford, GU1 3HY ISBN 98-1-907211-86-7 248pp softback £9.99

This book is a history of British corporation bus operators flavoured with a strong dose of nostalgia and a hint of polemic. It is useful, cheap and interesting. It contains a great deal of information about the ways in which municipalities started their operations, and went out of business, but is marred by factual errors such as the suggestion that Hartlepool (the borough created in the 1972 Local Government Act) sold its fleet to Cleveland Transit, when in fact the concern went to Stagecoach via an employee buy-out. There are also some non sequiturs, for instance 'Perhaps because it (Cardiff Corporation) had persisted with trolleybuses for so long, the corporation was relatively late in introducing rear-engined motor buses.' Yet we also note that Kingston upon Hull kept its trolleybus system completely intact until the 1960s, and then replaced the trolley bus route with some of the earliest Leyland Atlanteans.

The book is definitely not for gricers. There are no references to the marques of vehicle operated, and other than the cover pictures there are no colour photographs, although one of the writer's major themes is the attractive liveries of corporation vehicles. There are eighteen poor quality black and white photographs few of which reveal 'the bus in the landscape' which is one of the author's interests. Even so, the local historian (and certainly local public libraries) should find the book interesting, although the prose is a little leaden.

Given the influence of changes in the law from the Road Traffic Act of 1930 to the Transport Act of 1985, it would have been helpful to have presented a short chapter on the ways in which statutes have conspired to reduce the number of municipal operators from over one hundred

to eleven (at the time of writing). Nor are the acts cited in the bibliography, which is in general very helpful.

Having said all this, the book is a bargain, and a refreshing change from the kind of photographic album which says 'here we see another of the operators Leyland Leopard PSU3/2 vehicles, this time with a Marshall 53 seat body', but makes no reference to the city in which it operates. And, for this writer, it at last made clear which small Welsh operators were transmogrified into slightly larger outfits with mysterious new names.

David Stewart-David

The London Bus
James Taylor
Shire Publications Ltd, Midland House, West Way,
Botley, Oxford, OX2 0PH
ISBN 13 978 074780 728 5
64pp illustrated £5.99

This is an attractively produced addition to the revamped Shire series, well illustrated and, for its size, comprehensive in its coverage. Compressing nearly two centuries of the evolution of ownership, operations and vehicles into 64 pages could have been no easy task, but the author has successfully met the challenge. The illustrations, which are an important feature of all Shire titles have been well chosen and captioned to supplement and support the text (although only one horse bus appears). The nine chapters are a mixture of chronological and thematic.

Vehicle types are, in general, well covered and illustrated, including Swifts on the Red Arrow Service at Victoria Station and the more recent experimental Fuel Cell Bus. The evolution of London Transport's main classes and their classification (T, ST, STL, RT etc.) is clearly explained, although interesting inter-war Leyland single-deckers (C, CR and TF classes) do not appear.

It is good to find a chapter devoted to the bus crews, even if the comment that the trade union 'showed its muscle as early as the late 1940s' overlooks such significant earlier action as the 1937 Coronation Strike. The 'Further Reading' section claims to be 'no more than representative', but it is disappointing not to find the magisterial two volumes by Barker and Robbins listed.

The reviewer must, however, end on a positive note: for those of us who were fortunate to grow up in London Country, venturing into the capital on Green Line services and using London's red buses once in the metropolis, James Taylor's book will evoke and order that experience, and for the stranger to Greater London it will provide as comprehensive an introduction as its size could permit.

Richard Storey

First & Last. A History of Reading & Co Ltd, Coachbuilders, Portsmouth David Whittaker The Provincial Society 30 Penhale Gardens, Fareham, Hampshire PO14 4NL

A4 67pp illustrated £10.00 + £1.42 P&P

This interesting concern had its origins in the apprenticeship of Alfred Reading, a shipwright's son, to a coachbuilder in 1860. He went on to set up his own business as a carriage builder, winning a medal in 1885 for his patent shaft adjuster. The birth of a son, Alfred James, in 1899 was followed by bankruptcy, but the business was kept going by Mrs Reading's financial control. When their son returned from the First World War, he developed the motor side of the business and moved the works to Hilsea in 1928, at first in a partnership. Inter-war, car repairs and the building of commercial vehicle bodies provided the staple work for what became a limited company in the 1930s.

The production of commercial vehicle bodies, including large and small vans, pantechnicons, drop-siders and ice-cream vans, continued after the war with large tippers and brewer's drays amongst Reading's post-war output. (Estate car bodies featured for a few years but their popularity was a factor of taxation regulations, rather than materials shortages). Numerous illustrations show bus and coach bodies by Reading, the earliest being a Guy charabanc of 1926. Of special interest are bodies for Provincial and for Channel Isles operators and the Reading 'Lilliput' coach body on the Karrier Gamecock chassis; there are chapters devoted to each of these aspects of Reading's production. A reproduced 'Lilliput' price list shows an interesting spread of operators, but with seven concentrated in the Coventry area.

Coachbuilding carried on into the 1960s, when the third Reading generation, AJ's daughter, Barbara Edwards, gradually took over the helm. She eventually concluded that Reading was too small to compete with the larger coachbuilders and sold out to the neighbouring Sparshatts. Following their sale to Wadham Stringer and subsequent rationalisation, the end came to Readings. However its history remains, zealously promoted by The Provincial Society, whose publication is strongly recommended.

Richard Storey