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The First Tubeless Tyres

Roy Larkin

Taken for granted today, the first tubeless tyres were produced by Dunlop Rubber Company Ltd. They were demonstrated to the press at the company's headquarters and manufacturing plant at Fort Dunlop in Birmingham in May 1953.

As with the transition from solid to pneumatic tyres, cars and light commercial vehicles were the first to benefit from the new technology. The initial range covered sizes from 5.00x14 to 6.50x16 and were marketed at twenty per cent above the normal retail price of tube type tyres. They also carried a weight penalty of ten per cent, although weight and cost of the traditional inner tube had been removed. It was anticipated that as production costs reduced as demand increased that the price would eventually be the same as for conventional tyres.

They could be fitted to any style of modern wheel with an air seal forming between the tyre's bead and the wheel rim. The covers had an inner lining of equivalent thickness to an inner tube, which because it was not under tension reduced pressure loss by a claimed 50 per cent. A composite layer was sandwiched between the outer cover and inner layer which self-sealed to prevent sudden loss of pressure if the tyre was penetrated by a nail or stone.

New valves and sealing rings were supplied with the tyres which fitted the hole that the inner tube valve would normally fit through. The tyres were unsuitable for multi-piece rims used on some of the heavier vehicles and commercial vehicles.

Commonplace on cars by the 1960s, it was not until the early 1970s that one-piece

wheels began to replace the traditional split-rim wheels on commercial vehicles and tubeless tyres began to find favour with commercial operators.

Just as pneumatic tyres eventually replaced solids, so the tubeless tyre eventually replaced the inner tube universally on both private and commercial vehicles.



Dunlop advert from the Commercial Motor in 1953

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Editorial

It scarcely seems possible that 2009 is now drawing to a close and that another year of Newsletters/Journals has been completed. I have enjoyed producing it for you and hope you have enjoyed receiving it.

My thanks to all the contributors, Bob McCloy for the conclusion to his research into South Wales bus services and Ian Yearsley for his history of the Tramways Museum.

Thanks to Tony Newman, Ken Swallow and John Hibbs for their contributions to Members' Forum. Without your contributions Members' Forum would become stale, or even worse defunct.

Please ensure its variety and continuation with your snippets, information or requests for information. There is a wealth of knowledge within the Association and members' Forum is the place to tap into it and to share.

With the long winter evenings

now upon us, it is a good time to revisit the Association's website at www.rrtha.org.uk which is being updated. The 'Resources' page might lead you to that vital piece of information, or even to a new project. The 'Members' Projects' page may introduce you to somebody needing information you have. Consider having your own project listed. My own listing has produced contacts who would otherwise have remained unknown. Initial contact can be made through myself, as editor of the Journal, if you don't want personal details made available.

The Committee wishes everybody a very happy and prosperous 2010 and looks forward to meeting you all at the Members' Meeting at Coventry and also to your comments and suggestions regarding future speakers and to your help in ensuring the continued success of the Journal with your contributions.

New Members

The Association extends a warm welcome to new members, R Marshall of Luton

and M Greenwood of Sheffield.

Contents

The First Tubeless Tyres	1
September Members' Meeting	3
Association Matters	3
Buses and Politics in South Wales Part 2	4
The World's Biggest Lorry	10
Crich - Fifty Years as a Source for Historians	15
Fifty Years Ago	17
Members' Forum	18
Book Reviews	19
Letters to the Editor	20

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September Members' Meeting

The Members' Meeting held on 26 September at the Coventry Museum of Transport provided speakers as diverse as they were interesting. The result was a meeting that highlighted the strength and diversity of the Association and perfectly demonstrated why attendance at Members' Meetings should be regarded as a 'must do' for all members. A measure of the interest each speaker generated was the stimulating discussions that ensued.

Julian Stray

Letterboxes on Trams and Buses.

Julian Stray, of the British Postal Museum and Archive ([website: http://postalheritage.org.uk/](http://postalheritage.org.uk/)), described how in some cities and towns tramcars, and sometimes buses, had mailboxes attached to them. The purpose was to make it easier for people to post their letters than by walking to what might be a distant pillar box.

Huddersfield tramways were among the pioneers of this service, which usually incurred a small extra charge paid to the tram conductor. There were issues of how the box should be attached, who should empty it, and whether it was too heavy – the Portsmouth postmaster complained that a letter box on the Gosport-Lee-on-the-Solent bus weighed more than 26.5lb (11.8kg) empty. The practice largely died out in the 1920s and 1930s.

John Edser

A Schoolboy's Memories.

John Edser recalled the kinds of London Transport buses that were in service in the 1940s, when the LT, ST and STL types were the backbone of the fleet, with the occasional RT. Also on the road was the last new delivery of London trolleybuses.

Dorian Gerhold

Towards a Business History of Stage Coaching – Bristol's Stage Coaches

Dorian Gerhold, who has already published several books about road transport in Britain before the motor age, gave a stimulating talk about his next work: *Towards a Business History of Stage Coaching – Bristol's Stage Coaches*.

He took us through the growth of stage coaching from small beginnings in the 1660s to its loss of business when the railways took away its passengers. Improvements in the roads and in the way the coaches themselves were built led to a substantial increase in traffic around the end of the 18th century. But it was not just their construction that enabled stage coaches to cover the ground faster than other carriages; it was the fact that they changed horses regularly at inns along the road, so they did not have to wait for tired horses to revive. Dorian Gerhold is focusing on the Bristol coaching firms to illustrate how the business expanded and then contracted across the country.

Roy Larkin

The Written Word – Fact or Fiction

Your editor used a passage from *The Transport Revolution from 1770* by Philip Bagwell to illustrate how the written word can sometimes portray a different impression to the reality.

Taken in isolation individual statements might be correct but lead to a different impression to when the wider picture is included. Research into road transport must expand into the social and political arenas if it is to be understood and an accurate picture provided.

Association Matters

AGM

The AGM and Spring Members' Meeting will be held at the Coventry Museum of Transport on 20 March 2010 at the usual time, 11.00am.

Please be sure to add this date to your diary, so as not to miss what promises to be another day not to be missed with exciting speakers planned.

Subscriptions

Subscriptions for 2010 become due shortly. The appropriate form is included with this Journal and we look forward to receiving your renewal.

It is some years since we enquired about members' interests so, this year, the form includes space for you to give brief updated details. The information will be for the use of the committee only, but if there are others with similar interests, we may ask you whether you would like us to put you in touch with the other member.

Our record of email addresses is also somewhat out of date and there is also provision on the form for you to provide this, once again for committee use only.

Finally, may we ask you to return the form with your payment to the Treasurer without undue delay. Reminders cost the Association money as well as making more work for our small team of volunteers.

Buses and Politics in South Wales - Part 2

Robert McCloy

Act 2: Obduracy and obloquy, 1926-1936

The consolidation of operations had as its background the pain of the General Strike which constituted a watershed: a hopeful future gave way to a grimmer realism and a period of council obduracy towards the government, earning for itself the government's obloquy. The council had, nevertheless, added its voice to those advocating an armistice to end the strike.

A further inquiry took place in 1928 into the council's refusal to renew licences to W.J. Davies & Son and C. Davies & Son to run in competition with the trams. Roberts, who later became Town Clerk, stated, 'the company was entitled to protection, had a convenient service, a large capital at stake and contributed considerably to the rates.'

The appellants retorted, 'when the trams started a large number of horse brake proprietors and drivers were crushed out of existence. Now the up-to-date buses had come along and were squeezing out the obsolete trams, he did not see why tramway owners should squeal'.

The inspector suggested a compromise which was agreed: the watch committee should modify their protective action on behalf of trams, and buses should charge one penny above the tram fares for each stage.

The commercial press descended upon the town in 1928 reporting favourably upon the state of transport: 'although there is great trade depression, ...undertakings still continue to provide regular services and, in certain instances, developments have taken place even in the last twelve months, in which trade conditions have been particularly unfavourable in the area, ...the Corporation's services continue to flourish, and from quite a small beginning the fleet has gradually been increased, ...incidentally, pneumatic tyres are now being fitted to all vehicles'.

Deteriorating economy stimulates mobility

There could be no gainsaying the underlying deterioration of conditions. By 1930 Merthyr Vale had lost 1,195 miners. Other valleys had gained: Rhymney 1,012, Neath 1,073, and Amman 1,208. Daily individual journeys from Merthyr varied: 542 travelled to Glynneath, 89 (but including a contingent from Aberdare) to Onllwyn and Banwen, 120 to Bedwas, 50 to Cilfynydd, and 115 to Abercynon.

In 1936, 1,031 Merthyr miners daily travelled more than ten miles. Relatively, few in Treharris travelled significant distances because of local mining work. As housing was provided in the anthracite areas the need

for daily travel for some reduced. Much of the travel throughout the coalfield was local. Out of a sample of 70,000 workers in extractive and manufacturing industries, only 8,500 travelled to work across the boundaries of their own employment districts.

Overall, between 1921 and 1931 Merthyr's population reduced by 17.3 per cent. A further 6 per cent reduction took place by 1935. Thus the population declined from 80,116 in 1921 to 71,108 in 1931 and 61,440 in 1939.

Lloyd George argued for a national initiative of public works. Keynes backed the approach but was concerned about the movement of labour. Delay, however, would simply make the problem greater. 'In view of the rapid development and immense potentialities of road transport, there is nothing extravagant in a road programme upon this scale.' The government's response was grudging.

In 1929, Boards of Guardians could not cope with the relief of poverty and were superseded by Public Assistance Boards formed by councils. The weekly benefit was not large: the 1928 rate was £1.3.0d for a married man and two shillings for each of his children not in work. In 1931 benefit was reduced by 10 per cent and means testing applied. The government decided to standardise payments to curtail the 'excesses' of Labour-controlled councils. Merthyr people reacted: the unemployment assistance office was attacked.

The government now instigated an inquiry into the council's administration. The doleful results of that inquiry were communicated in April 1933. There was no evidence of general council extravagance and maladministration 'on a large scale'. The council was counselled to appoint a small committee, to remain whilst the crisis lasted, 'to review thoroughly the whole of the administration and to make proposals for improvement and economies'; appoint an external candidate of extensive local government administrative experience as the new town clerk 'who should supervise the whole administration of the council and advising them on all matters of policy'; consider reducing the number and size of committees, the duration and incidence of meetings; understand that committees should not attempt to do the detailed work of administration, that individual councillors should not interfere with officers in their work, except the chairman and he only as the representative of the committee with its express authority; consider contracting out some work to save money and test competitiveness of direct labour; give no preference to seniority and local men in appointments; advertise senior posts; and differentiate wages for labourers. Much of this became orthodox local government theory.

However, in the instance of creating the new transport service, the indictment that there was an improper split in the function between member and officer should be quashed. Officers contributed significantly to policy formulation and identified detailed action. Members energetically contributed to policy-making. The indictment concerning the incidence of meetings must obviously stand.

Road traffic regulation

The new decade ushered in the new regulatory regime for road transport. The inquiry into Risca council graphically illustrated the tensions between operator and council and the venom of exchanges that could be generated. The 1930 Road Traffic Act sought to address road safety and regulation, enjoyed broad political consensus and established area Traffic Commissioners.

In each area - South Wales and Monmouthshire was one - there would be a panel of three Commissioners, a full-time Chairman and two part-time Members nominated by panels of urban and rural authorities, all appointed by the Minister. A.T. James, K.C., who occupied the office of Chairman with aplomb, soon gained respect from councils and operators for fair judgement.

In May, 1931, the Commissioners met at Merthyr and resolved the 'quarrel' between the council and Imperial Motors Limited. As a result of a Ministry of Transport ruling the company had been permitted to join Merthyr and Cardiff councils and the Rhondda Transport Company Limited on the Cardiff-Merthyr road.

Imperial Motors Limited had undercut them with lower fares, producing exceptionally an operating deficit, unhelpfully seized upon, by the Royal Commission, who were ignorant of the circumstances. The council had relegated the company to 'a more obscure terminus'. The company having brought their fares into line with the other operators, the Commissioners determined that the company could share the same Merthyr terminus.

They duly licensed the council's services and those of the Western Welsh Omnibus Company Limited between Aberdare and Merthyr and between Aberdare and Ystradfellte, having purchased Dare Valley. Additionally, they sanctioned Imperial Motor Company Limited's service between Merthyr and Travellers' Rest, and that of the Red and White Services Limited between Tredegar and Dowlais.

The licensing regime being replaced was subsequently described by Red and White Services: 'some of the local authorities' views were much too selfish and parochial. This poisoned public relations and was destructive of all real progress in passenger service development'.

The first report in respect of South Wales and

Monmouthshire suggested that progress had been made albeit that, because of sensitivities, it had been decided not to hold initial conferences of councils and operators. 'There can be no doubt that in the past some operators were labouring under a sense of grievance, either real or imaginary, (possibly more imaginary than real), that they had not received fair and judicial treatment at the hands of some of the licensing authorities.'

The report commented upon council joint operations, now possible without costly parliamentary sanction, and noted that several had been authorised. It was observed that similar joint provision had been made previously. This, of course, embraced Merthyr's service to Cardiff, to which the commissioners, at their meeting in December 1931, formally applied local restrictions preventing the joint operators from competing with local services in Merthyr and the trams in Cardiff, or undercutting railway fares between Merthyr and Cardiff.

A concern taken up sympathetically by James and his colleagues was the fate of the numerous small operators, when pruning provision resulting from the recession took place. Parliamentary agitation had prompted Pybus, the Minister of Transport, to issue urgent guidance to ensure that small operators' claims were considered. The Commissioners' first annual report had also highlighted the fact that the majority of operators had each but a few vehicles.

Thereafter, they returned to the theme fearing that the loss of small operators would compromise innovation and did much to safeguard their interests. There were many sales which the Commissioners confirmed were without duress and at terms favourable to the sellers. Even before the Commissioners' writ, some independent bus services were beginning to prove unprofitable and were offered for sale. In Merthyr, the council 'chose to purchase' W.J. Davies' Aberfan service for £1,250 in August, 1929. Davies had been the last independent on the route.

On occasion miners, having walked to work, at the completion of the shift, no doubt weary, forced their way on to already crowded vehicles. Sometimes, unnotified shift changes led to overcrowding. Commissioners urged the management of the mines that operators should be better briefed as to anticipated loadings.

The part played by the weather led the West Monmouthshire Omnibus Board to record weather records: many miners walked between March and May, rain stimulated patronage of the services. Prior to the Act, councils might favour the local firm against 'intruders' inhibiting the building up of linking services. The Act now compromised the survival of the smaller independent that the Commissioners, Pybus, and later, John Hibbs and Nicholas Ridley, would wish to protect.

Connecting services was a public boon whilst being both cause and effect of amalgamation.

GWR had cause enough to be concerned about the loss of traffic but the railway was still a major transport mode. Marquand believed that road passenger transport had peaked in 1937. However, the number of buses in the Traffic Area rose from 2,714 in 1937 to 4,398 in 1950.

Claims concerning rail, accordingly, merit qualification. *The Second Industrial Survey* actually showed that only approximately 8,000 out of 43,000 travelled by train. Travelling miners constituted 36 per cent in the eastern coalfield and about 38 per cent in the western out of the total workforce.

'Transference'

In March, 1934, the government commissioned Portal to report on the condition of the four areas worst affected in the UK by the Depression. Portal opposed forcing industrialists to establish new factories in areas such as Merthyr and favoured surplus workers being transferred elsewhere. Subsequently, a Commissioner was appointed to take forward a programme with a District Commissioner for Wales. Small funds meant that little could be achieved.

What the council considered was necessary was defined in May, 1934: forestry schemes, five road and bridge projects and 'drainage and covering' of the River Taff at Iron Bridge, by now dangerous' ...owing to the numerous omnibus services entering Merthyr and the internal services operated by the Merthyr Tydfil Corporation...' The estimated cost was £232,600.

The council opposed 'transference' and, on 20 March, 1935, the Mayor and a special sub-committee said as much to Sutherland, the Commissioner, and Crawshay, the District Commissioner for Wales. The only way to help Merthyr was to establish new industries. 'Merthyr had Social Services, Schools, etc. to serve a population of 80,000... the population would soon be reduced to 60,000.' The older people left would have to bear this financial burden since most block grants were on a *per capita* basis'.

Sutherland clutched from this observation that it was not objection to transference but its financial effects that concerned the council. He guardedly agreed that 'there seemed to be some cause for a measure of relief.

Reflecting thereon, Crawshay, in May, confirmed '...it must be obvious that the migration of the able bodied married and unmarried men, the latter being potential householders, means a reduction in the income of local authorities...'

Royal Commission

The government now decided to establish a Royal Commission to consider whether Merthyr Tydfil should cease to be a county borough. The government had itself partly brought about the crisis by agreeing to the transfer of responsibility for unemployment relief to counties and county boroughs. The culture within the Ministry of Health was surely one of scorn for the council which might possibly be shared by its former Deputy Secretary, Lowry, when appointed chairman of the Royal Commission.

Nevertheless, the Commission's analysis was perceptive, even though its conclusion was not: '...The Borough has had its full share of the misfortunes of the coal industry and has entirely lost its iron and steel works. The difficulties due to the loss of employment and of rateable value were intensified when in 1930 the ...Council became responsible for Public Assistance...'

The Commission anticipated no revival, recommended Merthyr's territorial integrity, demotion to municipal borough, sympathised with those mourning status loss, sought to assuage concerns by noting that police and quarter sessions could survive, and thought that public assistance should be assigned to an extra-council body.

Key evidence had been presented by the Merthyr Employment Committee: over 1,000 men travelled twenty to twenty-four miles to collieries at a cost of seven shillings weekly for each person, and about one hundred travelled to new steelworks at Cardiff. The latter left home at 4.00am and returned at 7.30 or 8.00pm. If married, 'with fair sized families', they would be far better off unemployed. The Government should pay the fares permitting the wages to stimulate the local economy: '...the Government are at present subsidising 'idleness' whereas if they helped these men they would be subsidising 'work'.'

The Commission ignored this evidence, possibly guided by their Secretary's briefing. Referring to the men travelling daily, he noted: '...these are the younger men ... will tire of the cost and inconvenience ... will decide to live permanently at Cardiff or Port Talbot'.

Having concluded that 'the administration of the Council is none too good ... their officers are mediocre', he bleakly summarised: '...12,000 men are unemployed with little or no hope of being reabsorbed. Merthyr is living mainly on some coal mining, unemployment allowances and Public Assistance. Since 1921, over 10,000 have read the signs and have left the town. Evidence has been given that the exodus continues'.

S.O. Davies addressed the Commission in a stinging attack: 'Appointing a Royal Commission merely to consider the question of status is an unpardonable

affront to a people who for the last 10 years have borne their enforced poverty with such hopefulness ... in the appointment of the Royal Commission the Government has placed itself on trial...' Prophetically, Isaac Edwards, President of the Merthyr Tydfil Liberal Association and of the town's Council of Chambers of Trade, argued that Merthyr should be a dormitory town since 'it was very well situated for feeding collieries within ten miles as it is doing now...'

The Commission's written evidence included the Omnibus Committee's minutes and accounts. The latter vindicated those believing the operation would be profitable, revealing that in the period 1930-35 there was overall profitability with the undertaking annually contributing to general reserves and depreciating funds and reducing its loan debt. Vehicle miles run had risen from 568,457 in 1930 to 611,391 in 1934, having peaked at 640,629 in 1932.

The Commission offered no comment on the service's utility in helping the community reach employment or recreation. The Chairman of the Omnibus Committee and Omnibus Superintendent did not meet the commission. The Secretary, in summary, noted that, with falling reserves, the service 'may become a charge on the rates', and that the Local Economy Association had urged that 'it should be carefully considered whether the undertaking should not be handed over to public enterprise on equitable terms'.

No doubt stung by the Royal Commission, the Controller reported: '...it is quite obvious that but for the loss on the Cardiff service, the result would have been a net profit of £489. 19.3d ...the Superintendent anticipates no loss in the year ending 31 March 1935.' Lowry's commission, possibly a creature of a foregone conclusion, did nothing to arrest an insidious nurturing of what a later generation of analysts would call a dependency culture.

Transport development and the trams

There was a slight reduction in income at the beginning of 1935. Later in the year, a 'fairly substantial increase in traffic' was reported: total mileage compared with the previous year had increased by 282 per cent. Arthur Ellis and Partners, consultants, now advised that were the tramway to be purchased, its revenue would be insufficient to cover its debt charges but a purchase in 1942, under the 1888 Act, would be more favourable to the council.

The accounts revealed that the electric light business was four times more profitable than the tramway and that significant sums had been disbursed as dividends and allocated to reserves. The council had applied to the Electricity Commissioners to authorise MET's purchase and replace the trams with trolleybuses. The

authorisation was withheld, with the alleged high cost of lighting to residents a dominant council consideration.

The council had the right of purchase the businesses (trams and electricity supply), at market value and subject to arbitration, under the company's order, on the expiry of the 1934 statutory powers. The committee recommended purchase in principle on the expiry. MET had earlier sought a deal: it would possibly surrender the tramway were the council to forego for ten years its right to purchase the electricity business as allowed under the order.

The Electricity Commissioners, duly consulted, after discussions with the Ministry of Health, predictably declined to approve the purchase. MET continued to operate the tramway at a loss and the electricity business at a profit. In 1936, MET proposed further terms: tramway abandonment with the council having the salvage, paying cash (the average of the last three years' receipts), and reinstating the roads. The council rejected the terms.

The Ministry of Transport, in 1935, invited authorities to submit projects for a five year roads programme. The council had no difficulty in identifying its list but had unsuccessfully sought a 100 per cent grant. Whilst there was thus little prospect of major highway construction to bring new life to the valley, small solace was offered by Crawshay: he would consider applications for grants towards open air swimming baths.

Of strategic consequence, Gloucestershire County Council had called a meeting of councils that might be interested in a Severn bridge. The Mayor represented Merthyr and the proposal was backed in principle. Here indeed was a development that in time would truly aid the stricken town.

Appointment of Adviser

There was now a stay of execution to give effect to Lowry's recommendation in view of 'the formidable difficulties in the way of legislation', which should have been anticipated much earlier. Instead, the Minister of Health would 'invite the council to accept a person' (as 'adviser') for a period of twelve months.

J. Rowland, Chairman, Welsh Board of Health, duly took up this ambiguous office, having discussed in the Ministry 'the plan of campaign' at the end of a year. His report probably would not allay the Minister's fears and a further year was granted pending reconsideration.

A year later, Rowland duly shared with the Ministry of Health a draft of his report. He had found members and officers 'always ready to discuss all matters at issue with complete frankness...', they had accepted his advice to revise standing orders, to route all financial proposals

via the finance committee, 'the general standard of efficiency is fairly good, with certain exceptions...', staff improvement was compromised by the absence of a superannuation scheme, low pay for chief officers, and loss of competent staff to better paid posts elsewhere, and that officers 'are never reinforced by the recruitment of capable and experienced persons from other authorities..'.

Rowland believed that 'taking into consideration the duration and intensity of the depression and the difficulties with which the Council is confronted, most of the authority's services are ...fairly well administered'. Such being his conclusion some would have questioned the need for his implied costly reforms.

Nevertheless, as 'plotted', he recommended that a decision on relegation of status be deferred for a further year, bearing in mind the government's consideration of 'active measures' to restore industry, the need for the new Town Clerk to have the opportunity of improving efficiency, and the council's recent success in producing a rate reduction. The council had appointed Roberts as Town Clerk, ignoring Rowland's advice. The report was not well received in the Ministry of Health: their man had gone native, although the text was interpreted to show the council's 'complete incompetence.'

Act 3: Opportunism, 1937-39

The National government had opposed intervention but pragmatists across the political spectrum found it increasingly impossible to stand aside. As Ted Rowlands noted, 'a government, ideologically committed to non intervention, introduced a second Special Areas bill which breached all fundamental principles hitherto promoted and preached...'

He attributed this to 'rumblings' in cabinet (concerns about violence getting out of control), 'growing unease among government back benchers', a highly critical Commissioner's report (which had to be published at a politically inconvenient time), and the unexpected foray by the King into the distressed areas, pressure from the hunger marchers and public sympathy which 'had transmitted itself to the Commons'.

Nevertheless, the council was subjected to yet another survey which broadly concluded that under exceptionally difficult conditions much progress was being achieved. The closer government 'agents' got to local conditions the more sympathetic they became, sometimes attracting Whitehall ire.

Vigorous representations were made to site munitions factories in the area. In 1936, there were developments, albeit civilian: the Nuffield Trust provided capital for the Dowlais Kayser Bondor factory and South Wales and Monmouthshire Trading Estates built factories at

Cyfartha and Dowlais. Unemployment, however, remained high: 7,000 in 1938 and a further 900 had migrated between 1938 and 1939. Merthyr's plight now came before the Cabinet. The churches, led by Bishop Rees of Llandaff were also demanding action and this was reflected in the pages of *The Western Mail and South Wales News*.

There was minimal immediate apparent respite and the steady growth of the transport business faulted. By reducing costs crisis was averted. A profit of £900 for the previous year was reported by *The Merthyr Express* on 5 September, 1936, when the committee chairman commented on 'the highly satisfactory' financial year 1935-36. *The Western Mail and South Wales News*, sometimes acerbic in its views of the council, reported: 'Considerable improvement in the financial side...'

The March average weekly passenger numbers for 1936 had been 41,056, for 1937 44,034. There had been an increase on all routes compared with the previous month and previous year. As war approached, Thompson reported improvements in the volume of traffic relative to the same month in 1937, including a 'substantial increase' on the Cardiff service. S.O. Davies dramatically telegraphed the House of Commons announcement on 14 April: 'Big government factory was proposed to be erected at Merthyr Tydfil'.

In 1938, the committee agreed to purchase four buses, including a double-decker. Controversy subsequently erupted when, after firms had responded to the invitation to tender for oil-engined buses, Sentinel Waggon Works (1936) Ltd. placed a notice in the local press, addressed to ratepayers, complaining that their producer-gas model had been excluded, which 'provides work for Welsh miners, can still run if oil imports are cut off', was more economical to operate and had been successfully tested by the council. The council, on that occasion, after a lively debate, nevertheless accepted Thompson's recommendation to purchase for £13,663 six double-deckers and three single-deckers, with chassis manufactured by Bristol Tramways & Carriage Co Ltd., and bodies by Northern Coach Builders.

In October, at long last, the council reached agreement with MET: the company would discontinue its operation of sixteen double deck trams and support the council's application for road service licences, the council paying a sum equivalent to twice the annual gross takings (calculated to be £13,500), and the company retaining poles needed for electricity supply, at an agreed price. Road rebuilding and replacement buses would bring the total council expenditure to £45,000, provision for which would be made in the necessary parliamentary bill. In Swansea, the abandonment of trams and the introduction of buses had been widely praised. In Merthyr, increased transport efficiency and some fare reduction was anticipated.

The transport undertaking had performed well over the years in financial terms, as revealed in the Treasurer's report in October. He rehearsed the annual net profits and losses: the former ranging from £527 to £4,795 in each year from 1925 to 1937, the latter of £3,385 and £753 in respect of only two years, 1933 and 1934. The traffic counts for October, November and December had again shown that passenger numbers had increased over those of the previous year. The council approved the terms of the new bill in November.

The stirrings of renewed industrial activity, in the shadow of war, were reflected in the council's successful applications to the Commissioners for service revisions, especially additional workmen's services. By the same token, Roberts gave an upbeat presentation to the development committee in December on the many new factory projects.

In the final months of peace, there was a momentary blip in the passenger figures. In July, it was agreed that the bus and tramway undertakings should confer concerning the integration of staff. Thompson reported fully on the Brighton annual conference of the Municipal Passenger Transport Association where two significant presentations had been made: 'The Growing Problem of Workmen's and Other Fare Concessions' ('they belonged to an earlier age of low workmen's wages and proximity of homes and work, continental practice should be followed permitting larger numbers of standing passengers thereby necessitating fewer peak time buses'); and 'The Organisation of a Transport Department in a National Emergency' (role in evacuation, air raid precautions, staff training, provision of ambulances and evacuation vehicles, and vehicle lighting restrictions). Much was timely guidance but the reference to the passing of low wages may have occasioned a frown.

A sharp reminder that a renaissance was not yet universally contemplated was the publication, as late as March, 1939, of Political and Economic Planning's (PEP) recommendation that the town should be abandoned and its people re-housed on the coast or in the Usk valley: since there was no longer any reason for the town's existence and it no longer seemed reasonable to ask the taxpayers of the rest of Britain indefinitely to pay hundreds of thousands of pounds a year in order to give large numbers of people the doubtful pleasure and benefit of continuing to live at subsistence level in one of the least habitable districts...

The polemical style of the passage hardly does justice to PEP's more nuanced argument. Another late swipe at the town may have been seen in James' (Traffic Commissioners' Chairman) challenge to the Ministry of Transport proposal that the Merthyr Tydfil transport sub area be made co-terminus with the intended civil emergency jurisdiction: '...I think the Merthyr Tydfil

Area should be wiped out...' This, however, should not be taken as animus towards the county borough: it was rather a conviction that parts of Glamorgan and Monmouthshire, which had been included in the proposed area, related more appropriately to Cardiff and Newport.

The abandonment of the trams duly took place on 24 August, 1939, with civic pomp and the successful passage of the parliamentary bill. The replacement council bus service inauguration was duly reported in the local press. August and September witnessed passenger increases by comparison with the same months in 1938.

However, the curtailment of services to accommodate the 50 per cent fuel reduction now demanded by the Ministry of Transport was scheduled to take effect on 23 September. How this was to be done was left to the chairman and Thompson.

Vehicles were concentrated on peak services and Cardiff council and the Rhondda Transport Company Ltd., as part of their economies, left the Merthyr-Cardiff service entirely to the council. The result was a significant increase in patronage, a reduction in costs, and, therefore, greater profitability.

Two days later, the Plymouth Collieries Lodge registered a grievance concerning the fares on the buses replacing the trams. Miners had paid one penny for a single tram journey, two pence for a return ticket. The bus single fare was two pence with a return ticket costing three pence.

The committee would not bend: the tram fares had long been too low. The Treasurer reported upon the financial strength of the undertaking: though there had been a net loss of £124 for 1938, there would be a net profit of £3,116 for 1939. Thompson reported that new workmen's services had started on 30 October but that there had been a general monthly decrease in passenger numbers, albeit there had been an increase on the Cardiff service.

Conclusions

A number of conclusions, briefly stated, are suggested: cheap travel largely by bus increased and profoundly impacted upon the population at large even in a period of depression; the Road Traffic Act's regulatory regime had minimal beneficial effect in largely crystallising what happened to be in place, in failing to accomplish 'co-ordination', and in frustrating the development of council services which might have ameliorated unemployment; Whitehall's general role was distracting and destructive; and, in spite of all, local government councillors and officers combined to good effect, contrary to reputation.

The World's Biggest Lorry

Roy Larkin

In typical heavy haulage tradition, the Scammell 100-Tonners were conceived eighty years ago through the needs of a particular job.

Steam locomotive makers, Kitsons, needed a means of transporting out of gauge locos from Leeds to Liverpool for their overseas markets. The contract for transporting these heavyweights across the arduous trans-Pennine routes was entrusted to M.R.S. Ltd., (Marston Road Services) of Lightbody Street, Liverpool.

Long established as heavy hauliers, Ernest Charles Marston had developed a strong working relationship with Scammell Lorries Ltd., Watford. It was in 1929 that Marston approached Scammell with the idea that a lorry with a 100 ton carrying capacity would be ideal for the Kitson's contract.

The challenge of building what would be the world's biggest lorry was taken up by Scammell's Director of Engineering, Percy G. Hugh and his brilliant, though sometimes eccentric, young designer, Oliver D. North. In a remarkable feat of motor lorry development, it was a mere eight months from the initial enquiry to the first 100-tonner (KD 9168) being delivered to M.R.S. Both 100-Tonners were supplied in early 1930, with the second (BLH 21) delivered to H.E. Coley Ltd., Dartford, Kent.

The measure of this achievement is not only in comparison with modern day development times, but also that Scammell's biggest lorry at the time was the 25-ton

Machinery Carrier introduced in 1927. It was a further twenty years before lorry development allowed the two pioneers of heavy haulage to gracefully retire and allow more modern and powerful machines to take up the ever bigger gauntlets that would be thrown down by modern industry.

The motive unit was based on a massive frame of riveted steel plates. These were built into box-frame

with apertures for the engine, transmission and the turntable.

The engine was the Scammell 4-cylinder, 7094cc petrol engine used in the rest of the Scammell range of motive units. To cope with increased load capacity from 25 to 100 tons, the engine was tuned, increasing the standard 80bhp to 86bhp.

To accommodate the 0.75 mpg fuel consumption, three fuel tanks were fitted, giving a capacity of 103 gallons. In 1932, Pelican Engineering Co. (Sales) Ltd., of Leeds, replaced the original engine with a Gardner 6LW oil engine. This increased the power to 105bhp and reduced fuel consumption to 4mpg.

The gross train weight of 130 tons with only the modest power available inevitably meant that the transmission would need careful consideration. The gearbox used was the standard Scammell 4-speed box from the articulated 8-wheeler range.

Power was taken from the back of the gearbox to a central primary differential via a Spicer jointed telescopic shaft. This differential incorporated spur gears that doubled the available gears to eight. Power was then transmitted to each of the two in-line drive axles by way of chains. The two adjustable chains for each axle were 2.5 inch pitch roller chains adjusted by screwed radius rods.

The gear ratios were changed by two levers mounted one each side of the chassis behind the cab. The drive axles had to be changed separately



'KD 9168' with 100-ton carrier and Beyer Peacock loco seen here in Oxford Road, Manchester

of each other from outside the cab.

Each axle had two driving wheels with 8" x 771 solid tyres. The load carried by the four driving wheels being 40 tons. The axles were located by means of forward mountings on a heavy cross tube and trailing arms that were ball-jointed to the rear corners of the chassis frame. Rubber buffers were incorporated into the rear of the frame to absorb vibration, particularly when the carrier was running empty. The locating ball-joints allowed the axles to pivot and thus keep each of the four wheels squarely in contact with the ground.

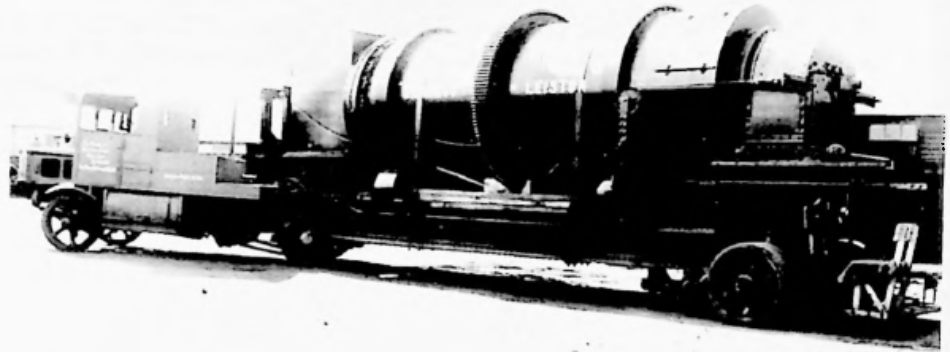
The primary differential compensated the left and right drive axles to allow corners to be turned. The track of the drive axles meant it was also necessary to include a differential in each axle to compensate the left and right road wheel on each axle.

The gearing of 196:1 in low ratio first gear enabled the 100-Tonners to negotiate gradients as steep as 1 in 10 and it was possible to achieve a road speed of 5-6 mph in the high ratio top gear.

Despite the modest road speeds, a gross weight of 130 tons still needed an impressive braking system. 16 inch internal expanding transmission brakes were fitted to each of the cross-shafts from the primary differential. They were operated by a choice of foot pedal or hand lever by the driver. The hand lever enabled the driver to hold the vehicle still on a hill while leaving both feet free to operate throttle and clutch pedals for clean re-starts without the need for wheel-chocks. Additionally, a hand-wheel to the driver's right operated screw brakes to each of the drive wheels.

The front axle was a massive double cranked unit with a design loading of 8 tons. Steering was by screw and nut steering gear and required seven turns of the cast steering wheel from lock to lock. Despite this low gearing, considerable effort was required at manoeuvring speeds.

The motive unit was completed with a large, square wooden cabin that had all the styling features of a garden shed. Originally, both 100-Tonners had



BLH 21 in the livery of the Metallic Ore Production Company carrying the stone crushing plant. Note the steersman's chair on the back of the 65-ton carrier

vertical windscreens, although sloping windscreens were later built into KD 9168.

The motive unit was only part of the 100-Tonner. The other half was the huge load carrying semi-trailer. Scammell at this time always referred to their trailers as 'carriers' to differentiate between their articulated semi-trailers and the traditional drawbar trailers, common to the period. This tradition continued into the 1950's and had its origins in the road tax laws of the 1920's.

The carriers for the 100-Tonner were built in two sizes. The smaller intended for 65 ton loads and the larger for loads up to 100 tons. The main components of the two carriers were the same with the extra capacity of the 100-Tonner gained through the addition of extra axles.

The carrier comprised two box-girder side members. These were attached by pin bolts to the side webs of the riveted swan neck. The tremendous strength required of the swan neck came from a three feet diameter cross tube between the side webs. The connection between motive unit and carrier was through a six-inch ball joint.

The 65-Ton carrier had a wheelbase of 50 feet and two in-line axles with four solid tyred wheels. These axles were mounted by means of massive rearward projecting trunnions to the rear of the carrier bed. They were free to oscillate on a vertical axis and could be steered by a huge vertical wheel similar to a ship's wheel.

Initially only a platform was provided for the steersman, though a wooden cabin was soon added as protection from the elements. At first, a tiny open-sided cabin was built on the left rear corner of



KD 9168 in MRS livery. The sign on the cab roof is advertising Pratt's Motor Oil

the carrier. The open side allowed the steersman to lean out to operate the centrally mounted steering wheel. This was later replaced by a full width, fully enclosed cabin with windows all round. The steersman's cabin was removable to accommodate over length loads.

Clear communication between driver and steersman was obviously of vital importance on a vehicle of this size and weight. To overcome the 78 feet distance between the driver and steersman an Alfred Bell Admiralty type telephonic communication system was installed. When the cabin needed to be removed, the steersman and driver communicated by whistles.

A wheelbase of 50 feet, gross weight in excess of 100 tons and the uneven road surfaces of the period inevitably resulted in ground clearance problems. These were largely solved with the fitting of hydraulic rams at the joint between carrier bed and swan neck. By using a hand operated, double cylinder flywheel pump the rams could be used to raise and lower the carrier bed.

Fully extending the rams raised the front of the carrier by 15 inches, which resulted in an additional 8 inches of ground clearance. The carrier could also be lowered by 12 inches when overhead clearance was a problem.

This jacking system could also be used when the drive wheels sank through the road surface, which was a common problem of the day. By raising the carrier and placing it on bolsters, steel plates could be positioned under the drive wheels and, when lowered facilitate the continuation of the journey.

The 100-ton carrier was identical to the 65-ton carrier. The additional payload was gained by the addition of a second pair of axles. These were mounted between the carrier frame and the original steering axles of the 65-tonner. This gave a bogie carrying weight of 80 tons. Although the leading axle was still steerable by the rearmost axle.

Both axles comprised fully interchangeable

parts, which made it easy to transform the carrier from 65 tons to 100 tons and vice versa, depending on each individual job requirement.

KD 9168

Sales Order 23 May 1929

1287 - 100-ton Motive Unit Chassis No. 1428

1288 - 100-ton Carrier Chassis No. 1481

1289 - 65-ton Carrier

Customer - M.R.S. Ltd.

Vehicle delivered on 20/1/1930.

Cost: £475.00.00.

A note on the Scammell sales ledger stated that mechanical parts for the 65-Ton carrier were to be fully compatible with the 100-Ton carrier and that enough additional parts be supplied to convert it to 100 tons.

KD 9168 was originally supplied to M.R.S. in M.R.S. livery and then re-painted in Edward Box livery when M.R.S. bought the Liverpool haulier for his name. It was then absorbed into the Pickford's fleet before passing to Jack Hardwick of Ewell, who restored and rallied it. KD 9168 now resides in the British Commercial vehicle Museum in Leyland, Lancs.

BLH 21

Sales Order 23 May 1929

1290 100-ton Motive Unit Chassis no. 1429

1291 65-ton Carrier Chassis no. 1501

Customer - H.E. Coley Ltd

Vehicle delivered on 27/2/1930.

Cost: Motive Unit £3,100.05.00

Carrier £1,800.00.00

Total £4,900.05.00

A note on the sales ledger describes BLH 21 as a standard 65/100-ton Motive Unit with still radiator,

80bhp engine, complete with cab and short platform for tools.

BLH 21 was originally supplied to H.E. Coley, Dartford, Kent, though it was liveried as 'Metallic Ore Production Company', before passing on to Norman E Box, who were part of the Hay's Wharf and Cartage Company. It was then absorbed into the Pickford's fleet and now resides with Rush Green Motors.

Comparing the Scammell sales ledgers, it is interesting to note that the second 100-tonner was ordered before work had even started on the M.R.S. original concept. This shows remarkable confidence by Scammell that Percy Hugh and Oliver North could build a vehicle capable of carrying more than four times the load of their biggest current lorry.

There is also the huge disparity in cost of the two machines, for which no irrefutable and recorded reason has, as yet, come to light. It would seem that the £4,900 cost of BLH 21 would be the true cost as the biggest Scammells at the time, the Pioneer, cost £2,000 and the Pioneer Gun Tractor, £2,800. The £475 paid by M.R.S. would only have bought a Dennis or Albion 40-cwt truck in 1930.

Word of mouth theories are that M.R.S. helped with the development and initial build costs which is reflected in the price. Or, that it was part of a deal struck to allow Scammell to sell, what was in effect Ernest Marston's idea to competitors of M.R.S.

To have been the only operator of such a vehicle would have been of immense advantage to M.R.S.

and there is also the question of how H.E. Coley knew enough about the vehicle to have the confidence to invest nearly £5,000 before the first one had even started to be built.

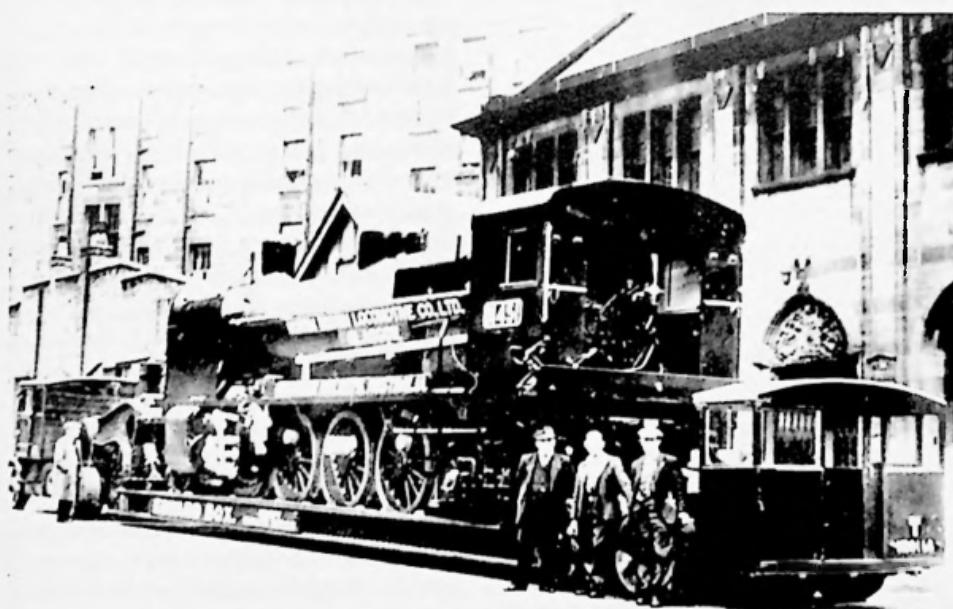
Although the initial inspiration for the 100-Tonner was the Kitson's locos, one of the first loads carried by KD 9168 was very different. It was a 25 ton, 56 foot launch, built for the Royal Air Force by Harland and Wolff at their Bootle works. Large crowds lined the 1.5 mile route to the Hornby area of Liverpool docks for what, in 1930, was regarded as a mammoth operation.

From 1943, regular work for KD 9168 was Transporting 2-8-0 type locos from Newton-le-Willows to Gladstone Dock, Liverpool. Weighing 75.5 tons, 37'11", long, 10'4" wide and 14'1" high, these locos were built for the Ministry of Supply by Vulcan Foundry Ltd. Destined for Czechoslovakia, Poland, Yugoslavia and Luxembourg, over 80 of these out of gauge giants were transported by 1946. Special tracks were laid in the dock to unload the locos and Edward Box Scammell Pioneers were used to control each loco during unloading and position it for the ship's loading cranes.

The first load for BLH 21 was a stone crushing machine for the Metallic Ore Production Company Ltd., of St Austell, Cornwall. It is likely H.E. Coley bought BLH 21 purely for this job. The cab was liveried with the Metallic Ore Production Company name, but in a handwritten style and not the pristine standard that would have been expected on such a high profile advertisement.

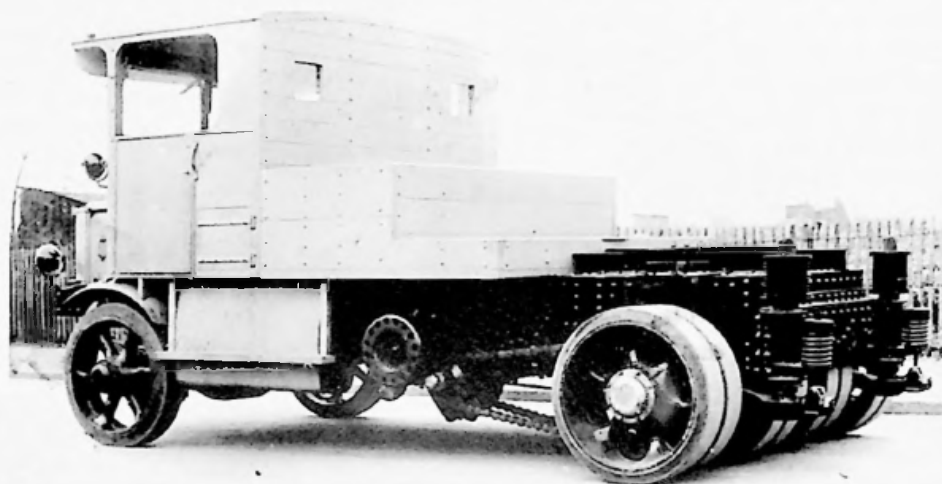
BLH 21 appears to have passed into Norman E Box

ownership almost immediately after transporting the crusher to Cornwall. With no local means of lifting the crusher, the carrier was left on site as the base for machine. There is no record of Scammell Lorries ever building a replacement carrier. Crane of Dereham built a 110-ton trailer for Pickfords which was supplied in the winter of 1930. By this time BLH 21 was liveried in Pickford's colours following their takeover of Norman E Box in early 1930.



KD 9168 with 100-ton carrier loaded with a North British Locomotive Co. Glasgow locomotive destined for export to Australia. The steersman's chair has been replaced with a steersman's hut.

Although built as a semi-trailer, it was quickly converted to drawbar configuration in keeping with the majority of the predominantly steam powered Box fleet. This configuration naturally meant that less load was placed on the motive unit. The conversion allowed the carrier to be used as a conventional semi-trailer or drawbar trailer depending on the individual jobs requirements.



When used as a drawbar, BLH 21 had a propensity to lift the front high into the air when moving away from a standstill. This earned it the nickname of 'Leaping Lena', a name that remained with her for the rest of her life.

The main girders for the Cumberland Hotel at Marble Arch in London were delivered by BLH 21 and one of the more unusual loads carried by either of the 100-Tonners was a stranded 85-ton whale.

One of Leaping Lena's more arduous tasks was to transport 3,100 ton, 242KV transformers from BTH at Rugby to Manchester docks for export to Russia in December 1943. With the winter conditions, even double headed by an ex-Norman E Box steamer, the journey took ten days. In 1951, BLH 21 transported a Vulcan diesel loco from Newton-le-Willows to London for the Festival of Britain.

The heaviest load carried by either of the 100-tonners was a 165 ton ingot mould undertaken in December 1935. This was carried from the Brightside Foundry and Engineering Co., Sheffield, to the Vickers Works of the British Steel Corporation, also in Sheffield by KD 9168. After taking three hours to load, the journey was completed at an average speed of 2 mph.

It is testimony to the design skills of Percy Hugh and Oliver North, and the strength of these two goliaths of road haulage that it was over two decades before they were allowed to retire in 1953. Even so, the trailer for BLH 21 survived in the Pickford's fleet into the 1960's.

Fresh from the Scammell works - probably KD 9168.

Until Foden and Pacific produced their 100-tonners in the early 1950's, KD 9168 and BLH 21 remained the only two lorries with a genuine 100 ton carrying capacity, without the need for doubling or trebling up prime movers.

Whilst KD 9168 and BLH 21 justifiably hog all the limelight, there was a third Scammell 100-tonner. Built to a scale of 1.25" to 1', it was built entirely of Meccano and powered by electric motors. It was an exact replica of the full sized 100-tonner and included a 16-wheel drawbar trailer.

The model was built to plan the route of a particular load, presumably to be carried by BLH 21 as it involved a drawbar configuration. The load was a pre-formed, 99-ton steel girder of huge proportions. The model was used to determine the correct lines to take around corners and to determine if the route was indeed possible, by using a scale plan. Once the correct lines had been determined, the route was marked with chalk to assist the driver and steersman.

However, even this level of forward planning was found to have a major flaw. It failed to take into account the huge crowds that assembled to watch the movement of such massive loads. By the time the load arrived, the crowd had obliterated all the chalk marks and it is testimony to the crew that the journey was completed without incident. It was, however, necessary to use a steamer to winch the carrier sideways to negotiate some of the corners en-route.

Crich - Fifty Years as a Source for Historians

Ian Yearsley

During the past year, the Tramway Museum Society has celebrated the golden jubilee of the museum at Crich, Derbyshire. The TMS, and the National Tramway Museum indeed, has its own story to tell and this will be recounted briefly, but I shall also try to evaluate the role played by the Museum and its library and archives as an outstanding resource for historians, not only of tramways but of roads and road transport in general. I shall also discuss the way in which the restoration of George Stephenson's 1842 stone workshop, for which funding is now under discussion, will expand the research facilities into the field of road construction and the 19th century imperatives of public health in the rapidly expanding cities.

The Crich site does not represent the whole story of tramway preservation, or even of the TMS. That story began in 1948 when a group of members of the Light Railway Transport League (now Light Rail Transit Association) bought a Southampton open top tramcar, no.45 for £10.00. The LRTL set up a Museum Committee to oversee this project and other purchases which followed. The Museum Committee however faced two big problems. One was the difficulty of finding secure accommodation for objects as large as tramcars, and the other was a potential conflict of interest between the parent LRTL, which was campaigning for tramway modernisation, and the Museum Committee which was focused on the past.

The upshot of this was the formation, in 1955, of a separate Tramway Museum Society, which took over the collection of seven tramcars, two tramcar trucks, a towing lorry, two road trailers and a collection of debts and notices to quit. Such were the problems with notices to quit that several cars had to be dismantled and offers of others refused. This was the period when the last urban tramway systems were diminishing and closing down, Leeds in 1959, Sheffield in 1960 and Glasgow in 1962. The discovery in 1959 of the former quarry site at Crich came only just in time to allow cars from these sources to be preserved.

Celebrations this year were timed to reflect the events of 1959; on 31 January the TMS Committee inspected the site, travelling its length in an open wagon hauled by diesel locomotive, Ted, on the remaining quarry tracks. Following this, an extraordinary general meeting at Matlock on 11 April voted to lease

and later purchase the site. The first tramcar, Cardiff water car no.131, arrived on the site on 8 May and was followed by a whole stream of others, all on low-loaders and unloaded by mobile cranes. Construction of depot buildings followed, and tracklaying commenced, so that by 1963 it was possible to carry passengers by horse tram and on 6 June 1964, electric operation could begin.

From then on the site was developed, not just as an operating tramline, but with an Edwardian street, an exhibition hall, tram depots and workshops, and a library and archives, which is now one of the most extensive in the country. So, the 50-year celebrations this year, in which the museum's patron, His Royal Highness the Duke of Gloucester, took a full and enthusiastic part, reflected the part played by the Museum in providing facilities for historical research as well as demonstrating historic tramcars in action. More facilities are on the way, but an article in the September 2009 issue of the tramway history journal, *Tramway review*, raises some interesting queries about these. With the permission of its editor, Dr Richard Buckley, I reproduce three paragraphs from this.

Essentially he asks the question 'what constitutes history' and says that museums are not themselves history. But what role do they play in history? The Encyclopaedia Britannica defines history as the discipline that studies the chronological sequence of events based on a critical examination of source materials and usually presenting an explanation of their



The Deputy Lord Mayor of Cardiff, Keith Hyde with TMS instructor, Ian Rigg aboard Cardiff Tramcar 131 during the golden jubilee celebrations at the Tramway Museum, Crich - TMS

causes. But does that include the ordinary passage of everyday life as well as the special happenings; does 'history' include what people usually had for breakfast as well as what decisions were made and actions taken?

Perhaps one of the weaknesses of much recorded tramway history lies in its failure to relate to everything else that was happening at the time. Developments now planned at the National Tramway Museum should go some way to correct this; one of the exhibits planned for the George Stephenson stone workshop building of 1842, for which Heritage Lottery funding is now under discussion, will seek to present the street tramway in relation to road building techniques, both of Thomas Telford and of McAdam.

Already the John Price memorial Library at the Museum has possibly the largest collection of transport books in the country. The subjects covered extend far beyond purely tramway topics into the realms of town planning, economics and politics, all those matters which shaped and gave purpose to tramway history.

Richard Buckley is right in saying that a museum can never completely replicate the past; the splendidly restored Leeds tram sadly lacks that municipal disinfectant aura that was characteristic of that city in the 1940s and 1950s. Only one or two of the Crich conductors can speak in authentic cockney accents when crewing London Transport car no.1622. But a museum, like an impressionist painting, enables us through a few deft brushstrokes to imagine the whole scene, and because our own imagination is engaged, the whole impression is so much stronger. This is the key also to the presentation of history in dramatic forms, whether as pageants or historical plays, or even to 're-enactment' events, such as those of the 1940s which are popular at Crich and elsewhere.

This highlights one of the ongoing debates in museum circles, the sometimes conflicting demands of authenticity and accessibility. After the fire which damaged the restored tea clipper, *The Cutty Sark*, at Greenwich, one of its trustees said that what was really needed was two *Cutty Sark*s, one preserved in dry dock with as much original material as possible, and the other a seagoing replica, able to give people the authentic experience of being at sea in such a tall sailing ship.

The same debate goes on at Crich; if we restore a tram for operation in public service we have to modify it to meet modern safety standards; safety glass has to replace plate glass, modern insulation has to be installed on power cables, emergency valves fitted to air brakes. We are also aware that some of our vehicles are more than 100 years old, and had they remained in their original service for that time, almost every component would have been renewed at some time or another. So what exactly does original mean?



Cardiff Tramcar 131 with Tramway Museum Society President, Richard Clarke, HRH the Duke of Gloucester and Ian Rigg at the golden jubilee celebrations. - TMS

The Museum is now well advanced in preparing what are known as 'attitude statements' which explore these arguments for each individual vehicle, trying to evaluate what it contributes to the story of tramcars as a whole. But meanwhile there is scope for historians of roads and road transport to use the extensive collection of books, documents and artefacts to expand what Richard Buckley rightly describes as 'the study of the past, less an attempt to recreate it than to understand it'.

Some of the milestones in the study of tramway history have in fact been those which set it in the wider context of social and economic history and, in particular, A. Winstan Bond's 1979 Walter Gratwicke Lecture 'The British Tram - History's Orphan' and in the 1987 London University Symposium 'Tramway London' published by the LRTA and edited by Martin Higginson in 1993.

Work now in progress by Kevin Hey at Salford University on the political influence of Sir Eric Geddes, first Minister of Transport, whose belief in monopoly in exchange for service largely shaped London Transport, could well form another such milestone.

Those wishing to use the library at Crich should first contact the archive collections officer, Mrs Val Ross, or the curator, Glynn Wilton, on 01773 854321 to make an appointment to visit. The curator can also be contacted by email at Glynn.Wilton@Tramway.co.uk

Fifty Years Ago

From the pages of Commercial Motor, 1959

Too Much Transport in Britain

Britain had 'too much transport' said Mr R.J. Gunter in his presidential address to the conference of the Transport Salaried Staffs' Association at Hastings on 25 May. Transport should be treated as a single industry in a modern industrial country, he said.

There were far too many vehicles on the roads, he continued. It was the economies of bedlam to have thousands of vehicles carrying goods on outward journeys and returning empty. Many vehicles, particularly those of 2.5 tons and over should be integrated into a system.

Transport efficiency would come only when 'stupid inefficient' competition which ignored national economy was removed.

Lorry is Litter

A lorry is litter, within the meaning of the Litter Act, 1958, when it is abandoned, it was decided at an Oldham court on 24 August. Charles Aubrey, a general dealer, Barker Street, Oldham, was fined £5.00.00 for leaving a lorry on spare ground for two or three months.

Horse Power Gives Way

Three generations of his family had built up a haulage business with horses, said Mr R. Holden when he applied for to the North Western Deputy Licensing Authority, Mr A.H. Jolliffe, at Preston on 24 August for a motor vehicle of 3-tons on a B licence.

He explained that he would be able to do much more work than previously and if the application were granted he would dispose of two horses. He produced letters from customers who supported the application.

In the past, Mr Holden admitted he had worked only within a five-mile radius of Darwen, but he wanted to operate the new vehicle within a forty-mile radius. Mr P. Kershaw, objecting for the British Transport Commission, said that this was unreasonable and that no evidence had been produced to justify such a large radius.

Mr Jolliffe granted a

licence for six months with a radius of five miles. He advised Mr Holden to bring evidence of need when he came to renew his licence.

Last Trolleybus

New and revised services will be brought in effect in Hastings on June 1 when the last of the Hastings Tramway Company trolleybuses is replaced by Leyland Atlanteans operated by Maidstone and District Motor Services Ltd.

Stop Pollution, Says Diesel Expert

Pollution of the air by oil-engined vehicles could not be allowed to continue, said Mr D.W. Jacquest, diesel development officer of Armstrong Siddely Motors Ltd in a paper read to the International Clean Air Conference in London (October 1959).

He described such pollution as 'an appalling menace' which was rightly the target of public resentment. No engine ever left the manufacturer in an 'anti-social' condition and better maintenance must be introduced with trained staff using the latest equipment.

Mr P. Draper, of Shell-Mex and B.P. Ltd., said that it should be an offence to tamper with fuel settings on oil engines to try to obtain more power. This could not be done without emitting more smoke.

From the advertisements pages, 2 October

Old established haulage business, mid-Cheshire on two modern diesel lorries with A licences, 8-tons, with very good normal user conditions and vehicles in full work. Owner retiring. £3,950.



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MANUFACTURERS OF BRADY HAND AND POWER OPERATED LIFTS

Advertisement for Brady Shutters from Commercial Motor, August 1959

Members' Forum

From Tony Newman

Your article on Palladium Autocars Ltd (J69) sent me looking through my note books. Here are a few additional points I found on the subject.

I have references to Palladium PSVs in three issues of *Tramway & Railway World*:

15 July 1920 has a photograph of EE 2137, a Grimsby Corporation charabanc.

19 August 1920 a photograph of EE 21??, a Grimsby Corporation double-decker.

14 October 1920 a photograph of XA 9809, a Palladium demonstrator charabanc.

The Company Registration file at TNA Ref. BT31 19150/106620 tells an interesting story.

The business history began with John Ross MacMahon, a dealer in new and second-hand motor vehicles at 386 Euston Road, and 26-28 Southampton Street, London. On 27 December 1909 he and Donald J.W. Baxter registered a company to continue the business as The Motor Exchange Ltd. They held a 10-year lease on the Euston Road site from 25 March 1909 and an earlier 7-year lease on the Southampton Street site from 25 March 1907. The Euston Road site appears to have been developed for the Registered Office address was changed from 386-388 to 378-384 Euston Road on 5 October 1910.

The original nominal capital of 10,000 in £1 shares was doubled on 23 November 1912 by the injection of the additional capital by a man and his wife in India. The couple were named Nanabhoy Hormasji Moos and Meherbanu Nanabhoy Hormasji Moos, giving their address as 18 Esplanade Road, Fort Bombay, India.

A third director, Charles Grant MacMahon, Physician & Surgeon was appointed on 26 March 1913. He gave his address as 1 Upper Phillimore Place, Kensington, which hitherto had been the address of John Ross MacMahon who had moved to Berners Mansions, Berners Street London. Three months later an EGM resolved to cancel the shares allocated to Mr & Mrs Moos. Donald Baxter resigned as a Director on 26 May 1913.

On 28 July 1913 a change of name to Palladium Autocars Ltd. was formally registered and shortly afterwards the Registered Office was changed to Normand Road, West Kensington. In November 1913 the first Debentures were issued for £3,600 and Humphrey J Weld, a Motor Engineer of Station Road, Broxbourne, Herts was appointed a Director. He was

joined on the Board by Charles Quaif May, an architect living at Chislehurst, Kent in February 1914.

In November 1914 another EGM resolved to re-issue Mr & Mrs Moos with 2,000 shares, to be held jointly, in addition to the 420 they already held.

A further Director, William Alfred Fitzgerald, an engineer of 13 Malbrook Road, Putney, London, joined the Board on 7 December 1914. By 25 February 1915 the Registered Office had moved to Felsham Road, Putney and a Mortgage of £5,000 was registered on land at that address on 23 December 1915. Later in the file there is reference to a 'Debenture of Lease' dated 1 March 1915 between the LGOC and the Company relating to Felsham Road, formerly Gardner's Lane at Putney.

Early in 1916 Humphrey Weld retired and was replaced by Oliver Sutherland, an Accountant at 15 Eastcheap, London EC. A further £5,000 Mortgage was registered on 8 May 1916, on land and buildings at Felsham Road, and on 11 July 1916 a Mortgage Debenture was issued for £3,000 on the Company. By 8 November 1916 another director, P Edelston, an insurance broker of 4 Austen Friars, London EC had joined the Board.

During 1918 Directors May and Sunderland retired, in April and November, respectively. In November 1918 Mr & Mrs Moos transferred 420 shares to the MacMahon family, followed by a further 3,500 in August 1919. The £5,000 Debenture was satisfied on 1 January 1920. One more Director, William North Marshall, of 1 Roehampton Lane, Putney was appointed by 9 November 1920.

By 7 May 1923 the accountant Oliver Sutherland had rejoined the Board and a series of refinements to the remaining Debentures followed, but a Liquidator was appointed on 30 August 1924 because it was felt the company could not continue business. The Registered Office moved to 15 Eastcheap London EC. by 22 November 1924.

The file ends by noting that the business was sold for £6,000 by 23 December 1924 and the Company was formally dissolved on 22 February 1929. There is a Liquidator's File BT34 3506/106620 that I have yet to see, and this may throw some light on the purchaser of the company.

Two further files that may be of interest are BT31 27086/180180 and BT34 4738/180180 for Palladium Coachbuilding and Painting Works Ltd., a company registered in 1922. I have not yet seen these two files which would show whether the two companies are connected.

From **Ken Swallow**

'We wonder whether any of our readers would like to join us on a Committee to arrange for one or if necessary two hot pot suppers for the drivers and guards employed on the Lodge Lane and Smithdown Road buses; last winter their work was most trying and several were laid on one side on account of the extreme cold.'

St Clement's Parish Magazine, Toxteth, Liverpool – December 1892

From **John Hibbs**

As a boy, I remember walking up Lexden Road in Colchester one day, in the late 1930s, when a double-decker was moving away from a bus stop. The driver had just got away with a bit of speed when an Inspector

ran up, jumped on to the back platform, holding on to the post at the centre. Sadly, for him, the post came away, top and bottom, leaving him running along the pavement, holding it up straight. What we said to each other can be imagined!



Talbot Square, Blackpool, postmarked September 1936 - RL

Book Reviews

On Roads – A Hidden History

Joe Moran

Profile Books, 3A Exmouth House, Pine Street
Exmouth Market, London, EC1R 0JH
ISBN 978-1-84668-052-6. 312pp. £14.99.

This book could have been written specially for our Association. It is basically about motorways, mainly English ones, but there is a good deal about earlier roads as well. Each chapter starts with a picture, and the pictures set the scene – the first one shows a man sweeping an empty road, with a broom. Chapter 4 – *Please Don't Be Rude On The Road* – has a car cutting in at the last minute, in front of another, to reach a slip road. How much do we remember about the early days of motorways, when they were so *quiet*, and there was no barrier, just grass, between the two carriageways? The motoring journalist Leonard Setright argued that speed was safe, and when the 70 mph limit came in he said manufacturers made cars uncomfortable above that speed. His father invented the ticket machine we all remember yet.

The book is full of stories like this, but the main story it has to tell is fascinating. First everyone loved them, and now we hate them – no one opens a motorway now. The politics of the industry are made clear, and a multitude of new insights will be found. It is a big book, and a long read, but you won't want to put it down.

John Hibbs

The Toll-houses of South Devon

Tim Jenkinson & Patrick Taylor

Polystar Press, 277 Cavendish St, Ipswich, IP3 8BQ
ISBN 978 1 907154 01 0. 120pp. £8.95

The Toll-houses of Suffolk

Patrick Taylor

Polystar Press, 277 Cavendish St, Ipswich, IP3 8BQ
ISBN 978 1 907154 00 3. 84pp £7.95

These two books are intended to be the first of a series. After a brief explanation of the turnpike system and of the turnpike trusts within the area, all the toll-houses in the area are listed with details of the history of the buildings and, sometimes even the toll collectors. If the building still exists, a well reproduced photograph is also included. Layout is usually one toll-house per page and map references are usefully provided so that the modern day position is easily established. Demolished or 'lost' toll-houses are also included and in these cases the map references are probably even more useful as an aid for anyone seeking to identify the sites. There are also useful lists of references and bibliography. Companion volumes for North Devon and for Norfolk are promised for 2010.

Peter Jaques

The Heanor & District Omnibus Company

John Bennett

Heanor & District Local History Society, 12 Walton Court, West Hallam, Ilkeston, DE7 6NS or order online at www.heanorhistory.org.uk
ISBN 978 0 950843 06 3. 28pp. £2.50.

This little book by our member John Bennett relates the story of a group of four independent bus operators who, in 1934, formed a limited company to take over their operations, the four proprietors becoming directors of the company. The main business of all four had been the operation of works services to and from the large British Celanese factory at Spondon which employed around

18,000 people in the 1930s. Two local stage services were also operated on Fridays, Saturdays and Sundays over routes where the main service was provided by others. Unusually for such a small independent, the new company soon produced a neat time and fare table booklet (reproduced in full). A fleet list is included and details of the services licensed as is an appendix of local newspaper reports about incidents relating to the operation of the buses.

The intention of the merger seems to have been the possibility of economies in operation but any hoped for

improvement in profitability apparently proved elusive and after only four years the business was sold jointly to Trent, Barton and Midland General.

Some of the photographs would have benefited from reproduction at a larger size and their quality generally would have been improved by the use of a gloss paper but for the almost absurdly low price of this booklet there can hardly be cause for complaint; it would be worth the price just for the copy of the timetable!

Peter Jaques

Letters to the Editor

from Maurice Doggett

Whenever the Eastern Counties Omnibus Company and Eastern Coach Works are mentioned in books and magazine articles, I sit up and take notice as these two firms are my special interest. So, I was particularly interested in Bob Williamson's article entitled 'Destination Blinds' (J59).

Perhaps, therefore, I could add a few comments on the heavy flip-over painted metal plates utilised by Eastern Counties which were introduced when the Company was formed in July 1931. These were fitted to almost all of the vehicles acquired from the four constituent operators and virtually all subsequent new and acquired vehicles up to the beginning of 1946, when the last buses so fitted, three Strachan utility-bodied Bristol K6As (LKO 10-12) were delivered. These 'Bible Indicators' continued in use until 1955 when some surviving pre-war single-deckers received roller blind indicators contained in a separate box attached to the existing mounting, the 'bibles' themselves having been removed. In 1957, when these single-deckers were progressively withdrawn, Eastern Counties began a programme of incorporating these roller blind indicators in a selection of existing post-war ECW-bodied single and double-deckers which remained in situ until those vehicles were eventually withdrawn.

As a matter of interest, Bath Tramways received a batch of twenty ECW-bodied AEC Regals in 1936, which were fitted with Eastern Counties style 'Bible Indicators' and also West Yorkshire Road Car fitted a similar but modified 'bible' to their pre-war vehicles.

Whilst ECW fitted their standard 48" indicator display equipment to bodies produced from 1946 to the then Tilling Group operators, it was not until the coachbuilder was no longer permitted to construct bodies for other than the nationalised operators that their products were delivered with various styles of indicator displays specified by the particular operator, including the Clayton indicator for members of the BET

Group. Even after nationalisation, both Bristol Tramways (later Bristol Omnibus) and Brighton Hove & District continued to specify their own type of indicator display.

As Bob says, his article is only a brief outline of the subject which could extend to a book to cover it in much greater detail.

As a separate matter, a point of clarification is needed to Roger de Boer's article, 'Allenways Contract Fleet Memories.' In the fleet list given, both the Bristol/ECWs SHN 216 and UHN 349 were actually ex-United Automobile Services of Darlington, rather than ex-Darlington Corporation which is implied.

from Ian Yearsley

Robert Williamson's wide-ranging article on destination blinds brought together much information on these items of equipment, but made no mention of the British Electric Car company of Trafford Park, Manchester, which from 1901 onwards sold an internally-illuminated box with a roller blind destination display, almost certainly an American design. The equipment was described in *The Light Railway and Tramway Journal*, 2 August 1901 and the earliest examples were probably made for BEC by Laycock's Victoria Works at Millhouses, Sheffield. Within a few years it was widely used on tramways and enjoyed far greater success than the 478 complete tramcars built by BEC between 1902 and 1904.

Fuller details can be found in *The British Electric Car Company Ltd* by J.H. Price, Nemo Publications, Hartley, Kent - ISBN 0 903479 11 7, published 1978.

Manchester had so many short-turning destinations that each depot had several blinds for groups of routes and these were designed to be changed quickly when cars were transferred. The front sash-window arrangement and opening lid of the destination box on Manchester tramcars was intended to facilitate this.