

ROADS & ROAD TRANSPORT HISTORY CONFERENCE

NEWSLETTER No.3 January 1993

Chairman : Professor John Hibbs, OBE, University of Central
England in Birmingham, Perry Barr, Birmingham
B42 2SU

Secretary : Gordon Knowles, 7 Squirrels Green, Great
Bookham, Leatherhead, Surrey KT23 3LE

Treasurer : Roger Atkinson, 45 Dee Banks, Chester CH3 5UU

Research Coordinator : Ian Yearsley, 97 Putney Bridge Road, London
SW15 2PA

Newsletter Editor : Grahame Boyes, 7 Onslow Road, Richmond, Surrey,
TW10 6QH

EDITORIAL COMMENT

Several of the themes introduced in the last Newsletter have stimulated contributions to this issue: the impact of coal and railway strikes and road improvements on public transport, and the role of hand-propelled vehicles. Your editor was greatly encouraged by this evidence of the Newsletter contributing to the objective of the R&RTHC of 'promoting, encouraging and coordinating the study of the history of roads, road passenger transport and the carriage of goods'. That he has been able to fill this issue without any difficulty has made his task both easy and enjoyable. He hopes that it will similarly generate further contributions on these themes for the next issue, and also articles or queries introducing new themes. He would also be pleased to receive notes about other societies that cater for aspects of road transport history.

Another aim of the Newsletter is to disseminate information on the archives of road and road transport history. Readers are asked to submit details of the location, scope and accessibility of archive collections to Ian Yearsley, the Research Coordinator.

HON. SECRETARY'S REPORT FOR 1992

As reported in the last Newsletter, the first business meeting was held in March, when the Conference was formally constituted. A second business meeting was held in Coventry in September when it was unanimously agreed to invite Charles S. Dunbar, the doyen of road transport historians, to become our first President. Honorary Associate Membership was conferred on Professor Theo Barker, whose initiative and persistence led to the formation of the Conference. We were sad to learn of the untimely death of Ray Cook of the R&CHS, who was an active member of the initial steering committee and took a major part in organising the first Symposium in Coventry in 1991.

It was agreed that an important function of the Conference should be to build up a register of road transport archive collections.

A sub-committee, consisting of Ian Yearsley, John Birks and the Hon. Secretary, has been working on the arrangements for the second Symposium, which will be held at the National Tramway Museum, Crich on Saturday 6th November 1993. (See the separate announcement enclosed with this issue.)

The publicity given to the Conference in a number of road transport journals, following the issue of a press release in the summer, has led to a number of enquiries, many of which have resulted in individuals joining as Associate Members. Membership at the end of 1992 stands at 10 Corporate and 11 Associate Members.

ASSOCIATE MEMBERS

We welcome the following, who have joined as the first Associate Members of the R&RTHC. Their particular interests and affiliations are given in brackets.

Roger Bailey, 57 Victoria Court, Allesley Hall Drive, Coventry CV5 9NQ

Professor Theo Barker, Department of Economic History, London School of Economics, Houghton Street, London WC2A 2AE.

Christopher P.Byers, 119 Connaught Road, Roath, Cardiff CF2 3PY. [The hackney carriage/taxi industry.]

Charles S.Dunbar, 9 Christchurch Road, Malvern, Worcs WR14 3BH. [The road haulage industry.]

Jonathan M.Ellis, 28 Wheelers Lane, Epsom, Surrey KT18 7SA.

Professor John Hibbs, address above.

Dr Martin P.Higginson, 96 St George's Avenue, Tufnell Park, London N7 0AH [Links with National Railway and London Transport Museums.]

Stephen Laing, 70 Thornton Avenue, London W4 1QQ. [Royal School of Mines Motor Club; veteran and vintage vehicles.]

Ronald H.Miller, Woodlands Farm, Aylesbury Road, Aston Clinton, Aylesbury, Bucks HP22 5AG. [Restoration of commercial vehicles.]

William D'Arcy Ryan, 19 Hill View Road, Garstang, Preston PR3 1JU [Road passenger transport and tickets in the UK.]

Richard Storey, 32 High Street, Kenilworth, Warwickshire CV8 1LZ. [Archivist, Modern Records Centre, University of Warwick.]

CORRECTION

Owing to a misunderstanding, the name of the N.B.Traction Group was incorrectly quoted in Newsletter no.2 as the North British Traction Group. The editor offers his apologies.

TRANSPORT TICKET SOCIETY

The Transport Ticket Society caters for all who are interested in the theory and practice of fare collection and associated documentation, both at home and abroad. Most of the Society's 500 members are to be found in Great Britain, but the 50 overseas members are widely dispersed throughout continental Europe, the USA, Australia, Japan, and even Colombia.

Road transport is the main interest of half the membership, the other half being more concerned with railways. Smaller numbers concentrate on water and air transport, whilst many are interested in all four modes of travel. Some search diligently for stage coach waybills, turnpike toll or early rail tickets; others seek to document the rapid growth of computerised ticketing on present-day buses, trams, and trains.

The Society's monthly *Journal* carries illustrated historical articles and up-to-date news of developments in fare collection throughout the world. Members' researches are published in the form of *Occasional Papers* and contributions are often made to company histories and other works on transport subjects.

The TTS seeks to acquire redundant ticket stocks from operators who are changing their ticket systems or have ceased business and these are distributed to members for a modest charge. Circuits and pools enable members to exchange unwanted tickets; regular meetings in London and Manchester provide other opportunities for exchange of tickets and news.

The Society has a small library, mainly of bus operators' fare tables. The point of contact within the TTS for research enquiries is Roger Atkinson (address on page 1).

Further information about the Society and a specimen copy of its *Journal* can be obtained from the Membership Secretary: Courtney Haydon, 4 Gladridge Close, Courts Road, Earley, Reading, RG6 2DL.

RAILWAY & CANAL HISTORICAL SOCIETY

Some years ago the R&CHS recognised that the study of railways and canals cannot ignore other complementary and competing modes of transport. It redefined its role as 'to encourage the study of the history of transport, with particular reference to railways, waterways and all matters associated with them'. Specialist Groups have been established within the Society to exchange information on Tramroads, Road Transport, Docks & Shipping, and Air Transport.

The modus operandi of the Road Transport History Group is through the distribution, 3 times per year, of a selection of short occasional papers, too short or not yet in a form where the author is ready to submit them for publication in the Society's *Journal*.

Over many years the Society has been building up a Research Index, now comprising over 20,000 cards, containing details of the primary sources on inland waterways and railways held in Record Offices, Libraries and similar institutions. Whilst it does not aim to cover road transport history, it could be useful in identifying sources where there is some

connection with canals or railways. The Society's Research Officer, Tony Warren, 126 Millfield, Sittingbourne, Kent ME10 4TP, is happy to receive research enquiries from non-members.

The road transport bibliography for 1991 reproduced in this issue is extracted from the *Bibliography of the History of Inland Waterways, Railways and Road Transport in the British Isles*, published annually in the Society's *Journal*.

Enquiries about the R&CHS may be directed in the first instance through Grahame Boyes (address on page 1).

COAL STRIKE 1921: STIMULATION OF NEW BUS SERVICES

Reply from John Hibbs to the query in Newsletter no.2

This is a good point to raise, and one that deserves further attention. After all, by 1926 bus services were generally established, and I can think of no examples of new developments arising from it, though it is not impossible that some did. What contribution I can make to the subject, however, concerns the 1919 railway strike, which I suspect had a greater impact than the Coal Strike of 1921.

When, as a young man, I interviewed Mr Berry of West Mersea, Essex, for an article subsequently printed by Charles Dunbar in *Buses Illustrated*, he told me that, on the first morning of the strike, he had one bus waiting to leave Brightlingsea for Colchester on a newly-established service, with one of his sons driving. As disgruntled passengers came out of the station, and found the bus, they soon filled it, whereupon Mr Berry junior telephoned his father at Colchester, and two more buses were sent down. The predictable consequence was that the railway got very few of those passengers back, and Berry's bus service was firmly established. (I used to go to school on it.)

COAL STRIKES, PIT VILLAGES AND NEW BUS SERVICES: DONCASTER'S EXPERIENCE

By Philip L. SCOWCROFT

The previous note (Newsletter no.2) suggesting a connection between the 1921 Coal Strike and the emergence of bus services prompted me to glance at the position around Doncaster, itself a coalfield focus. Coal strikes did indeed affect the running of Doncaster Corporation's trams, not only in 1921, but during earlier pit strikes as well, between 26 July and 15 August 1919, when they stopped altogether, and likewise during October 1920. But despite these temporary inconveniences, the trams maintained their position and, by and large, their income (especially during the September Race Week) until replaced by trolleybuses in 1928-31.

It was the areas which were not served by the trams which saw the development of bus services at that period. Either side of 1914-18 collieries were sunk all around Doncaster; the accompanying pit villages looked to Doncaster for many of their social and shopping facilities. Of them only Woodlands, Bentley and, to a limited degree, Edlington were served by tram routes by 1916. Rossington, Hatfield (ie Stainforth),

arworth and Armthorpe were not; nor was the Pilkington Glassworks 'model village' at Kirk Sandall. Tramway extensions to serve Rossington, Armthorpe, Kirk Sandall and, more comprehensively, Edlington were considered by the Doncaster Corporation in 1919-20, but were rejected because of the high capital costs involved, which would have included much improved track facilities in the town centre -- long a bottleneck even with the existing system -- and extensions of up to three miles to some routes. Motor buses were seen to be the answer². The Corporation staged several tests with borrowed buses, including a London General K Type in July 1920, and they secured statutory powers in 1922 to operate trolleybuses (not to be used until the trams were replaced, as we have seen) and motor buses, whose routes, fares and other conditions of operation were carefully drawn to prevent competition with the trams.

Private operators, whether authorised or 'pirate' (in February 1924 it was estimated by the Corporation that 40% of all buses around Doncaster were unlicensed), were not quite so particular and there ensued a struggle between them and the Corporation's Watch Committee, who granted licenses to operators enabling buses to ply for hire in Doncaster and prosecuted unlicensed operators. The Watch Committee faced two ways, of course, as the Corporation were bus operators from 1922; but they appear to have carried out their task reasonably, and certainly a wealth of small operators appeared on the Rossington, Armthorpe and Stainforth routes, some of whom continued to run efficient, friendly services cheek-by-jowl with the Corporation until they were bought out by the South Yorkshire PTE in the late 1970s and early 1980s³. Stainforth was in 1924 served by seven proprietors operating eleven buses (more on Saturdays). The position with Rossington and Armthorpe was not dissimilar. Harworth was largely left to W.T. Underwood (later East Midland), the Corporation making little or no effort to exercise their powers in that direction. By 1928, 17 routes were operated around Doncaster by 30 authorised proprietors owning 424 vehicles.

- 1 The Woodlands tram route was replaced by motor buses in 1935. Another route (Avenue Road/Wheatley Hills) was mostly operated by buses from 1925, then turned over wholly to trolley buses in 1928.
- 2 They were not new in 1920. Rossington had had a charabanc service (operated by one H. Hancock) from Doncaster since 1916, if not earlier, while charabancs ran from Doncaster to Woodlands from 1908, at least until the tram route opened in 1916.
- 3 In the 1920s a vast majority of these non-Corporation buses appear to have been no larger than 14 seaters -- minibuses in modern parlance. The wheel has turned full circle on the present Armthorpe route(s) which are now operated, by SYT, entirely with 25 seat minibuses.

THE APPLICATION OF REINFORCED CONCRETE TO THE CONSTRUCTION OF ROADS AND TRAMWAYS

After reading the article on *The Emergence of the Motor Road* in Newsletter no.2, Ian Cormack submitted the following extract from *B.R.C. Roads: a Photographic Record of the Use of Reinforced Concrete in Modern Road Construction*, published by the British Reinforced Concrete Engineering Co.Ltd, Manchester c.1921:

The scientific and regular application of reinforced concrete to road construction was first introduced by the BRC Engineering Co. in 1911, since which time it has passed through the normal stages of growth of any new idea and now stands as a recognised feature of road construction. Actually it has emerged to save the situation in regard to road strength. Where road reinforcement in 1911 was expedient it is in 1921 a necessity and it is only a question of time and finance before every important road must have a reinforced foundation... Even today, is not expensive.

BRC road constructions are divided into three classes of work, which serve different purposes: these are road foundations, complete roads, and tramway foundations.

BRC Road Foundations

BRC Road Foundations are used under surfaces of stone setts, wood blocks, asphalt, and tar macadam. These require a permanently level bed, in order that they themselves remain level. A BRC foundation provides the level bed. The standard BRC foundation is concrete, 6 in. thick, reinforced with No.9 BRC Fabric. This is sufficient for the heaviest modern traffic in any ordinary ground, and is better than plain concrete 12 in. thick. In very bad ground thicker concrete and heavier reinforcement may be necessary, and in very good ground the thickness of concrete may be reduced.

Complete BRC Roads

Complete BRC Roads are the combined construction of reinforced concrete foundations and concrete surface built together as one. Although they are generally sprayed with tar, the drag and grind of the traffic is transmitted quite closely to the actual concrete, and the surface concrete must have a very hard wearing stone as aggregate. Where suitable stone is obtainable locally it is used throughout the concrete and the road is called a 'one course road'; where such stone has to be imported a softer and cheaper local material may be used for the bottom portion of the concrete and the harder material for the top $1\frac{1}{2}$ in., the top being laid within 20 minutes of the bottom. Such is called a 'two course road'. Complete BRC roads are generally 6 in. thick, reinforced with No.9 BRC Fabric laid $1\frac{1}{2}$ in. from the bottom. This construction has, during the 10 years which have elapsed since its introduction, been found sufficient for all ordinary cases. On very bad ground, such as soft peaty land, we have used thicker concrete and heavier reinforcement, but for ordinary purposes nothing further is required. The concrete is sufficiently strong in itself to withstand, without special reinforcement, the shearing stresses and the slight tensile stress which may occur at other parts than at the bottom. In soft peaty ground the tensile stress at the top of the concrete is increased, and No.14 BRC Fabric is then laid 2 in. below the top in addition to the No.9 at the bottom.

BRC Tramway Foundation

BRC Tramway Foundations provide for tramways the same purpose as is provided by BRC foundations for roads, that is, they give a permanently level bed on which to build a permanent superstructure. The concrete underneath the rails is generally 7 in. to 9 in. thick, of the same quality as road foundation, reinforced with No.7 or No.9 BRC Fabric cut

into sheets and laid transversely to the track 2 in. from the bottom of the concrete. The effect of the reinforcement is to spread the load over the whole width of foundation, the concrete does not crack, and the surface remains level. For a troublesome track the BRC Tramway Foundation is a certain cure, and for tracks on good ground it is economical because less concrete may be used.

WIDER ROADS AND BIGGER BUSES

By John Hibbs

In the 1950s a significant change came over the bus and coach industry as vehicles, particularly single-deckers, came to have greater carrying capacities. The impact of this on rural operation was closely related over much of England to changes in highway provision, and this interaction between roads and road transport seems to have been largely neglected.

Prior to 1950 the maximum 'box dimensions' for a Public Service Vehicle were fixed at 7'6" (2.3 metres) x 27'6" (8.4 metres), although the length could be extended to 30'0" (9.1 metres) if there were a third axle. An increased width of 8' (3.2 metres) was permitted in 1950, for a very peculiar reason, giving a good example of the obscurantist attitude of those responsible. A consignment of trolleybuses intended for export to South Africa, where 8' width was permissible, was diverted for use in Britain, and their use demonstrated practically the case for changing the Construction and Use Regulations. Yet even when this was done (and the third axle requirement was also dropped) the Traffic Commissioner for the Metropolitan Traffic Area sought to limit their use (on stage or express carriage services) to specified streets. The absurdity of this was made plain to him when it was pointed out that it did not and could not apply to contract carriages (private charter), and it was quietly dropped.

Within the box dimensions space had to be allowed for the engine, and the driver -- whether 'forward control' (sitting in a cab beside the engine) or 'normal control' (sitting inside the vehicle, behind the engine). The result was that for most purposes the typical seating capacity for a single-decker was limited to 33 or 35 people -- an odd number because an offside emergency exit allowed five seats across the rear. Most three-axle vehicles were in practice double-deckers. Faced with low bridges which limited double-decker operation, John Petrie of the Northern General company in the north-east designed and built a 44-seater saloon as early as 1933, using a side-mounted engine on a three-axle chassis, while at the same time AEC marketed the 'Q', in both single and double deck modes, placing the engine in a similar position, but inside the chassis frame. Nevertheless the standard 'half-cab' remained the general choice for a heavy coach or bus up to and after the 1939-45 war. By using lightly framed seats some models could accommodate as many as 37 passengers, but the cost in comfort was considerable.

Alongside these vehicles there remained after 1945 a remarkable variety of smaller ones, mainly coaches with normal control layout. (The author recalls conducting a *Reo Gold Crown* as late as 1955.) With 20 seats or less it was possible to dispense with the services of a conductor, and in some Traffic Areas this was extended to any vehicle with normal control and a front entrance. Foremost among available coaches were those built

on the Bedford OB chassis, or similar makes, which typically had a 29-seat body with front entrance, such as that marketed by the Duple coachworks as the *Vista*.

For small rural operators this type of coach (rarely in bus format) was the workhorse. The petrol engine was easy to maintain, and it not only gave a smoother ride than the diesel of the period, but the diesel was only economic on much higher mileages than these firms would expect in a year. (As late as 1957 a Suffolk proprietor was operating a petrol-engined Leyland double-decker.) But in the deep rural areas there was another reason why smaller vehicles remained attractive: the width of the available roads.

In the 1930s a number of improvements had been made, and today the observant traveller can judge the way things were by looking at corners that have been cut off, leaving a short right-angled piece of road with perhaps a few cottages on it. It is often hard to believe that commercial vehicles ever passed that way. Main roads were also improved, and the Trunk Roads Act gave us Eastern and Western Avenue and the dreaded East Lancashire Road. But for a small firm running a few buses on market days and Saturdays, with some school contracts and the summer excursion trade, the roads were still, to adapt a term, 'narrow gauge'.

Into this situation there came, around 1950, not just enlarged box dimensions (bringing the Bedford-Duple *Super Vega* normal control 38-seater coach), but the path-breaking development of an efficient, flexibly mounted underfloor engine. Suddenly, apart from space for the driver and an access door, the whole interior of the vehicle was available for revenue-earning capacity. Standard size went up to 41 seats (43 or 45 in bus format) and the half cabs were obsolete virtually overnight (their second-hand value collapsed as quantities of them came onto the market).

In the 1950s there was still a considerable demand for rural bus services, and the opportunity to run a bigger vehicle and save mileage on 'reliefs' was welcome. So also was the chance to increase labour productivity in the excursion trade: in term of drivers' wages it could pay to 'stop booking' and fill 41 seats instead of sending two drivers with 29-seater *Vistas*. By the start of the 1950s many small firms had acquired one or two diesel coaches -- Leyland, AEC, Dennis, Daimler or Crossley -- and had come to terms with the new technology, and while the underfloor engine had its own maintenance problems, it was at least more accessible than the forward mounted power unit -- provided always that you had a pit.

But what about the roads? It was here that a more far-reaching change, recorded in the books of George Ewart Evans, was taking place at the same time, so that bigger buses could run round the country lanes by the middle of the decade.

The years from 1945 to 1965 saw the end of a rural economy and a rural way of life that had changed little for 1,000 years or more. The effect on the landscape was devastating. Suffolk, which had been a county of small farms and small fields, was turned into the open prairie, exploited by the 'barley barons' in a form of agriculture based on the use of machinery. As the holdings were put together, field hedgerows were grubbed out, with financial support from the Ministry of Agriculture and, since roadside hedgerows had only been there to keep the livestock in -- and arable now

ruled all -- they went too. Rural roads exist as part of the infrastructure of agriculture, and local highway authorities, no doubt quickly aware of the need for wider roads to move combine harvesters over, took the opportunity for further improvement. Even where stock farming was still practised, old skills such as hedge-laying became costly, and hedge-cutting machines were acquired by councils to keep things 'tidy'.

So it was that, just as the bigger buses came onto the market, the roads were developed and they could be put into use. School contracts were altered, conductors (until made virtually extinct by the Act of 1968) enjoyed a brief heyday of prosperity, and passengers had greater comfort. (It could be argued that the first generation of underfloor engined coaches offered a better ride than anything since, short of the 'high-spec' imports of recent years, with their heavy power-to-weight penalty.) Whatever pressure may have been brought to bear upon the County Surveyor by the farming community, we may be sure that little thought would have been given to the rural bus operator. (In one market town in the early 1960s the Borough Surveyor designed and built a new bus station without providing sufficient turning space for a 9 metre vehicle; it seems he was not aware of the increased box dimensions.)

Sadly, this is not the end of the tale, for the very improvements that farm mechanisation brought about meant the shift of surplus labour to the towns, and the loss of just the traffic that had made so many small bus and coach businesses viable.

HAND-PROPELLED VEHICLES

Reply from Richard Storey to the query in Newsletter no.2

As unlicensed vehicles, it seems unlikely that any statistical measure could be applied to this type of road vehicle, unless records of a major user, such as Express Dairies, could be located, to provide a basis for the projection of a national total. The multiplicity of users and variations in the size of their 'fleets' would probably render any such calculation worthless. However, the ever useful *Shire Album* series provides an excellent descriptive introduction, with an analysis of types and examination of their builders: G.Backhouse, *Old Trade Handcarts*, *Shire Albums* no.86 (1982). Its illustrations cover a range of types, from the builder's handcart to the dairyman's 'pram'.

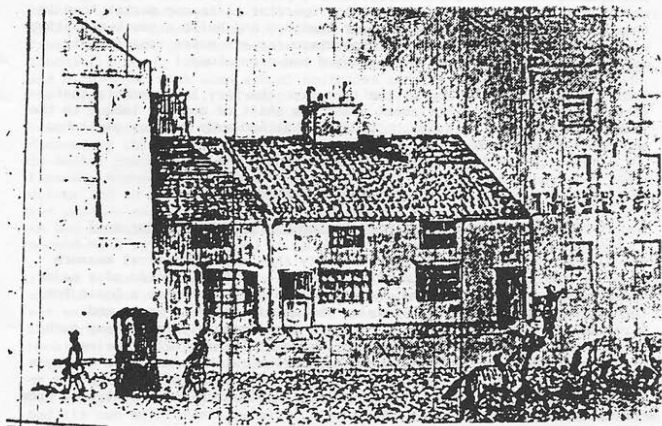
The present writer has recently been fortunate enough to purchase some manufacturer's literature of the late 1930s issued by D.Seibel & Co.Ltd, 'industrial truck specialists' of Borough, London SE1. The firm offered a range of hand trucks for municipal and other purposes, with steel or wooden bodies, on two or three wheels. They included covered trucks for gas companies' fitters, and low-loading trucks for refuse collection or appliance transport, as well as the ubiquitous builder's or general-purpose truck with pole handle. More elaborate, registered designs, such as the *Borough* and *Universal* refuse-collecting and street-sanding trucks, could be supplied with pneumatic-tyred wheels.

The company's promotional literature included a list of some of the councils, electricity, gas and water undertakings, commercial and other concerns, including co-operative societies, Hovis Ltd, and the G.P.O.

Engineering Department, which were users of Sebel trucks or the company's patent steel wheels. Reacting to the national preparations for defence against air attack (ARP), Sebels also produced and advertised *Sebeltow* ARP trailers to carry 10 to 12 cwt., for towing by a motor vehicle, but with the facility for a handle attachment to permit the trailer to be pulled or manoeuvred by hand.

SEDAN CHAIRS IN DONCASTER: AN EARLY MUNICIPAL VENTURE

Since Philip Scowcroft's article was published in Newsletter no.2, he has come across the drawing reproduced below of the municipal sedan chair in Hall Gate, part of Doncaster's main street. It is taken from the *Doncaster Gazette* of 17 June 1927, but the date of the drawing is not quoted.



BIBLIOGRAPHY OF ROAD TRANSPORT 1991

SECTION D ROAD TRANSPORT

DB ROADS AND ROAD TRANSPORT AT PARTICULAR PERIODS

DB1 Pre-history and Roman

- 785 ANDREWS, J.S. and J.A. A Roman road from Kendal to Ambleside: a field survey. Pt 1, Kendal to Broadgate. *Trans. Cumberland & Westmorland Antiq. & Arch. Soc.* vol.91 (1991) pp.49-57.
- 786 EARDLEY-WILMOT, HAZEL. New light on old travel routes: Combwich Causeway and the Harepath. *Somerset Arch. & Natural Hist.* vol.134 (1990) pp.187-91.
- 787 JAMES, HEATHER. The Roman roads of Carmarthenshire. In Sir Gar: studies in Carmarthenshire history: essays in memory of W.H. Morris and M.C.S. Evans. *Carmarthen: Carmarthen Antiq. Soc.*, 1991. pp.53-77.
Identification of the course of Roman roads in the former county from archaeological, historical & aerial survey evidence.
- 788 KEEVIL, A.J. The Fosseway at Bath. *Somerset Arch. & Natural Hist. Soc.* vol.133 (1989) pp.75-101.
- 789 MOORE-SCOTT, T. Ancient track or roadway between Maisemore and Hartpury. *Glevensis* vol.24 (1990) pp.34-6.
- 790 RICHARDSON, A. and ALLAN, T.M. The Roman road over the Kirkstone Pass: Ambleside to Old Penrith. *Trans. Cumberland & Westmorland Antiq. & Arch. Soc.* vol.90 (1990) pp.105-25.

- 791 SILVESTER, R.J. The Fenland Project number 4: the Wissey embayment and the Fen Causeway. Norfolk. *Derham Norfolk Arch. Unit*, 1991. pp.xii,162.2 microfiches. 12 pl., 75 figs. [*East Anglian archaeology*, report no 52] pp.95-115. The Fen Causeway. Survey of this Roman road & its surroundings.
- 792 SLATER, T.R. Controlling the South Hams: the Anglo-Saxon burh at Halwell. *Devonish Assoc. Reports & Trans.* vol.123 (1991) pp.57-78.
Considers its strategic location in relation to the local ridgeways.
- DB2 Early use of road transport, c.1066-1660**
- 793 BRAYSHAY, MARK. Royal post-horse routes in England and Wales: the evolution of the network in the late-sixteenth and early-seventeenth century. *Jnl of Hist. Geography* vol.17 (1991) pp.373-89.
- 794 BRAYSHAY, MARK. Royal post-horse routes in south west England in the reigns of Elizabeth I and James II. *Devonish Assoc. Reports & Trans.* vol.123 (1991) pp.79-103.
- DB3 c.1660-1900 The turnpike and coaching era**
- 795 CHARTRES, JOHN. Road transport and economic growth in the eighteenth century. *ReFRESH (Recent Findings of Research in Economic & Social Hist.)* no.8 (Spr.1989) pp.5-8.
Summarises recent research, emphasising the importance of roads, road transport & travel in the pre-rly economy.
- DC ROADS AND ROAD TRANSPORT IN PARTICULAR REGIONS OF THE BRITISH ISLES**
- DC2 Scotland**
- 796 MILLER, NORMAN and MARGARET. The Carlisle to Glasgow road: an early 19th century attempt to improve and maintain Scotland's most important road. *Trans. Dumfriesshire & Galloway Natural Hist. & Antiq. Soc.* 3rd ser. vol.65 (1990) pp.100-5.
- DC4 Ireland (See also no.219.)**
- 797 DE COURCY, JOHN W. A bridge in its time: the River Liffey crossing at Church Street in Dublin. *Proc. Royal Irish Academy* vol.90C (1990) pp.243-57.
Ford & four successive bridges on this site.
- 798 DE COURCY, J.W. The Ha'penny Bridge in Dublin. *Structural Engr.* vol.69 no.3 (5 Feb. 1991) pp.44-7.
Cast-iron toll footbridge over the R. Liffey.
- DC6 Isle of Man**
- 799 P.S.V. CIRCLE. Fleet history of Isle of Man Department of Tourism and Transport and its predecessors (including tramways). *London*, 1991. pp.75.[16] pl. Typescript. [*Fleet history PR1.*]
Tabulated details.
- DD ROAD ENGINEERING**
- 800 BOLTON, ANDREW. Coast clinger. *New Civil Engineer* no.958 (8 Aug.1991) pp.36-7.
Recollections of reconstruction of A55 North Wales coast road in 1930s.
- DD3 Architecture and design: bridges, viaducts, tollhouses, milestones**
- 801 CHARNOCK, GEORGE. Ancient bridges and a Hereford bridge brotherhood. *Trans. Woolhope Naturalists' Field Club* vol.46 (1988-90) pp.12-26.
Primarily concerns early 20th cent. restoration of ancient bridges in Herefordshire.
- 802 JEFFREE, RICHARD. The milestones of Richmond-upon-Thames. *Richmond History* no.11 (1990) pp.20-9.
- DE ROAD ADMINISTRATION**
- DE1 Turnpike trusts**
- 803 EVANS, A. LESLIE. Local tollgates. *Trans. Port Talbot Hist. Soc.* vol.4 no.1 (1990) pp.63-8.
Turnpike tollgates in the Port Talbot district, c.1764-1889.
- 804 MUNBY, JULIAN and WALTON, HUGH. The building of the New Road. *Oxeniana* vol.55 (1990) pp.123-30.
Provides evidence that this road in Oxford was built by the Botley Turnpike Trust, c.1769-70.
- DF ROAD VEHICLES AND ROAD VEHICLE ENGINEERING**
- 805 LEEMING, DAVID. Dieselman. *Old Glory* no.10 (Sep/Oct.1990) pp.14-15, no.11 (Nov/Dec.1990) pp.42-3, no.12 (Jan/Feb.1991) pp.62-4, no.13 (Mar.1991) pp.42-3, no.14 (Apr.1991) pp.44-5, no.15 (May 1991) pp.23-5.
The development of the diesel engine for road transport up to W.W.2.
- 806 TOWNSIN, ALAN. Pioneering the oil engine. *Vintage Commercial Vehicle Mag.* vol.7 (1991-2) pp.46-50,86-93.
The changeover from petrol to diesel engines for buses & heavier goods vehicles in the 1930s.
- DF1 Horse-drawn vehicles (other than omnibuses and trams)**
- 807 KEY, MICHAEL. A century of Stamford coachbuilding: a history of Henry Hayes and Son, carriage and wagon builders of Stamford, Peterborough and London (1825-1924). *Stamford: Paul Watkins*, 1990. pp.41.
- DF2 Steam powered vehicles (other than trams)**
- 8081 MIDDLEMISS, JOHN L. and SAWFORD, ERIC. Wm Allchin Ltd, Northampton. *Nuneaton: Allan T. Condie*, [1991?]. pp.100.
History of this builder of traction engines, steam rollers, & steam wagons.
- 8091 SAWFORD, E. Road rollers. *Nuneaton: Allan T. Condie*, 1990. pp.36. 70 photos (8 col.). [*Vintage steam album no.[?].*]
- 8101 SAWFORD, E.H. Showman's road locomotives. *Nuneaton: Allan T. Condie*, 1990. pp.36. 70 photos (8 col.). [*Vintage steam album no.3.*]
Photographic record of preserved vehicles.
- 8111 SAWFORD, E.H. Road locomotives. *Nuneaton: Allan T. Condie*, 1990. pp.40. 72 photos (8 col.). [*Vintage steam album no.5.*]
Photographic record of preserved vehicles.
- 812 WHITEHEAD, R.A. Brewery steam wagons. *Vintage Commercial Vehicle Mag.* vol.6 (1990-1) pp.186-9,222-5.

- 813 WHITEHEAD, R.A. Coulthards of Preston. *Vintage Commercial Vehicle Mag.* vol.7 (1991-2) pp.51-5,106-10.
History of T.Coulthard & Co., steam waggon manufacturers, 1895-1907.
- DF3-4 Motor powered goods and passenger vehicles**
- 814 BALDWIN, NICK. Maudslay: a family affair. *Vintage Commercial Vehicle Mag.* vol.6 (1990-1) pp.206-9, vol.7 (1991-2) pp.27-31,62-7.
History of the Maudslay Motor Co., 1901-55.
- 815 GEARY, L. Bedford: the commercial vehicle for all purposes. *Romford. Ian Henry*, 1991. pp.[iv],140.
Account of vans, lorries, buses & coaches built by Vauxhall Motors Ltd, 1931-86.
- 816 McKINSTRY, S. The Albion Motor Car Company: growth and specialisation, 1899-1918. *Scottish Economic & Social Hist.* vol.11 (1991) pp.36-51.
Business history, emphasising the commercial vehicle market.
- 817 WELLS, MIKE. Dodge: the history and production. *Vintage Roadscene* vol.7 (1990-1) pp.53-6, vol.8 (1991-2) pp.5-7.
History of Dodge Bros lorry & bus production in U.K.
- DF3 Motor powered goods vehicles**
- 818 BALDWIN, NICK. The early Austins. *Vintage Commercial Vehicle Mag.* vol.7 (1991-2) pp.86-8.
- 819 DAVIES, PETER. British lorries of the sixties. *Nynehead: Roundabout*, 1991. pp.128. Many photos (40pp col.).
A photographic record.
- 820 DE BOER, ROGER F. Birmingham's electric dustcarts. *Birmingham. Birmingham & Midland Motor Omnibus Trust*, 1990.
pp.64. Many photos, facsimiles, fleet list.
Electric vehicles of the City of Birmingham Salvage Dept, 1918-89.
- 821 STEVENS-STRATTEN, S.W. Light commercial vehicles. *London: Ian Allan*, 1991. pp.96. Many photos.
Outline histories of British manufacturers & their products.
- 822 WELLS, MIKE. The Leyland Comet range. *Vintage Commercial Vehicle Mag.* vol.6 (1990-1) pp.129-33,171-5, vol.7 (1991-2) pp.4-5.
Lorry type launched in 1947.
- 823 WELLS, MIKE. The Goliath that became Invincible. *Vintage Commercial Vehicle Mag.* vol.6 (1990-1) pp.210-13, vol.7 (1991-2) pp.6-9.
History of Guy Motors Ltd heavy lorry types, 1930-67.
- 824 WELLS, MIKE. Karrier Bantam. *Vintage Commercial Vehicle Mag.* vol.7 (1991-2) pp.56-9,102-5.
Development of this light vehicle type, built by Karrier Motors Ltd 1932-78.
- DF4 Omnibuses and coaches**
- 825 BAXTER, MIKE. Metro-Scania: setting the record straight. *Buses Extra* no.73 (Oct-Nov.1991) pp.15-23.
M.C.W./Scania U.K. production, 1971-9.
—Scania in Britain. pp.26-37.
U.K. orders & operation of Scania buses & coaches, 1979-91.
- 826 BOOTH, GAVIN. Catalogues of disaster. *Buses yearbook* 1992 pp.84-91.
Unfulfilled proposals in bus manufacturers' catalogues.
- 827 MILLAR, ALAN. Vanishing body builders. *Buses yearbook* 1992 pp.51-70.
Postwar decline of British bus body manufacturers.
- 828 PLATT, PHILIP and LUKOWSKI, NIGEL. The Harrington Cavalier & Grenadier. *Nynehead: Roundabout Pubing*, 1991.
pp.56. 80 photos(2pp col.),drawings.
Photographic record of two coach body types built by Thomas Harrington Coachworks, Hove, 1960-6. With specifications & detailed list of all bodies built.
- 829 SCANIA buses. *Buses Extra* no.73 (Oct-Nov.1991) pp.5-14.
A brief history, 1911-91.
- 830 TOWNSIN, ALAN. Six-wheeled buses. *Vintage Commercial Vehicle Mag.* vol.6 (1990-1) pp.142-7,165,182-5,204,216-19, vol.7 (1991-2) p.4.
History of this bus type.
- 831 TOWNSIN, ALAN. Provincial RTs. *Vintage Commercial Vehicle Mag.* vol.7 (1991-2) pp.22-6,84-5.
A.E.C. buses of London Transport class RT sold new or secondhand to provincial operators.
- DF6 Trams and tramway equipment**
- 832 FIPENZ, R.D. GRANT. A Merryweather mystery solved. *Tramway Review* vol.19 (1991-2) pp.103-6.
Steam engine supplied by Merryweather & Sons for a Copenhagen Tramways tram, 1875.
- 833 SKILLEN, BRIAN S. Scott-Moncrieff's air tram. *Scottish Transport* no.46 (1990) pp.31-3.
An early tramway experiment.
- 834 STEWART, IAN. Trams get an airing. *Building Services* vol.12 no.11 (Nov.1990) pp.54-5.
History of tramcar ventilation.

DG ROAD TRANSPORT ADMINISTRATION AND OPERATION

DG1a Animal-powered goods transport; drovers, packhorses, carriers

- 835 GIBSON, JEREMY. 'The immediate route from the metropolis to all parts...' *Cake & Cockhorse* vol.12 (1991-) pp.10-24.
Carriers & their routes through Banbury in early 19th cent.

- 8361 WATTS, KENNETH. Droving in Wiltshire: the trade and its routes. *Avebury. Wiltsh. Life Soc.*, 1990. pp.[?].

DG1b Steam and motor transport road haulage

- 8371 BOUGHTON, JOHN H. Steam in the veins, being an account of memories of the Boughton family business and related happenings in the Chiltern hills. *Little Chalfont: author*, [1990]. pp.iii,121. 120 illus.
History of T.T.Boughton & Sons Ltd, engineers of Amersham, incl. their involvement in round timber haulage.

- 838 INGRAM, ARTHUR. Brewery transport. *Nynehead Roundabout Pubing*, 1991. pp.72. [Trucks in Britain series.] A pictorial history of beer delivery lorries & tankers.
- 839 TUCK, BOB. Classic hauliers, vol.2. *Croydon Fitzjames*, 1991. pp.128. Many photos. Historical accounts & fleet lists of another 15 haulage companies.
- DG2 Transport of passengers (See also no.360.)
- 840 MINGAY, GORDON. Professor Symonds' tour 1790. In WRIGLEY, CHRIS and SHEPHERD, JOHN (ed), On the move (1991). pp.9-21. Extracts from diary of a tour from Cambridge to Scotland and back.
- 841 SCOWCROFT, PHILIP L. Coach and horse-bus services around Doncaster in the 1850s and after. *Jnl Rly & Canal Hist. Soc.* vol.30 (1990-2) pp.198-203.
- DG2b-d Omnibus, trolleybus and tramway operation
- 842 BROTHIE, A.W. Wife's trams and buses. *Dundee: N.B. Traction*, 1990. pp.[iv],92. 177 illus.
- 843 HERBERT, COLIN C. Tram v. bus on the Dumbarton road. *Scottish Transport* no.46 (1990) pp.5-12. Competition between Glasgow trams and Central S.M.T. buses.
- 844 HORNE, J.B. and MAUND, T.B. Liverpool Transport. Vol.5, 1957-1986. *Glossop: Transport Pubing*, 1991. pp.252. Many photos, 2 drwgs, route maps & diagrams.
- 845 JOWITT, ROBERT E. The girl in the street, or the bedside bus book. *Walford: Peter Wooller Transport Pubing*, 1991. pp.152. 350 photos (9 col.). Subtitle on title page verso: A poem in pictures praising public transport and the fair sex. Author's photos of street scenes with buses, trams, trolleybuses and feminine fashions in Britain & Europe, 1959-89.
- 846 MILES, PHILIP C. Humber-side trams & buses in camera. *Buckingham: Quates*, 1991. pp.80. 74 photos.
- 847 PENNY, MARK. Fleetbook of Blackpool Transport trams and buses. *Blackpool: Lancastrian Transport*, 1991. pp.[24],[4] col.pl.
- 848 STANIER, DAVID, WEST, KEITH and STANIER, LINDA. Trams and buses in Burton 1903-1985. *Derby: Carlton Pubing*, 1991. pp.80. 192 photos.
- 849 STRATHCLYDE BUSES LTD. Your wee happy book of Glasgow bus culture. *Glasgow*, 1990. pp.48 (incl.covers). Many illus. Collection of bus & tram anecdotes, humorous stories, cartoons & poems, with a selection of archive material & photos. Publ. as 'our own wee contribution to Glasgow's Year of Culture'.
- 850 WISE, GRAHAM. A history of Swindon Corporation Transport. *Buses Extra* no.74 (Dec.1991-Jan.1992) pp.4-10.

London and London Transport

- 851 BLACKER, KEN. Routemaster. Vol.1, 1954-1969. *Harrow Weald: Capital Transport*, 1991. pp.152. Many photos (15 col.). A detailed history of this bus type.
- 852 BRUCE, J.G. Going by the Board. *Omnibus Mag.* no.373 (Snr 1990) pp.9-10. Changes in London's transport 1929-89.
- 853 CURTIS, COLIN. 40 years with London Transport. *Glossop: Transport Pubing*, 1991. pp.152. Many photos. Autobiographical account of his career in bus research & development for London Transport.
- 854 CURTIS, MARTIN S. Bristols in London. *Buses yearbook* 1992 pp.25-33. Bristol buses owned by London Transport.
- 855 GLAZIER, KEN. RF. *Harrow Weald: Capital Transport*, 1991. pp.136. Many photos (8pp col.). History of this L.T. bus class. With tabulated details of the fleet & routes operated in appendices.
- 856 GLAZIER, KEN. London buses and the Second World War. 2nd edn. *Harrow Weald: Capital Transport*, 1991. pp.192. History of L.T. tram, trolleybus & motor bus operations during the war & the post-war recovery period up to 1950.
- 857 HAMBLEY, JOHN A.S. London Transport buses & coaches 1949. *Upton-upon-Severn: Self Pubing Assoc.*, 1991. pp.159. —London Transport buses & coaches 1950. 1991. pp.160. Photographic record of vehicles in each year.
- 858 LANE, KEVIN. Bus & coach recognition: London's buses. *London: Ian Allan*, 1991. pp.128. Many photos. Short accounts of each of the London Bus company units, L.T. contract operators & other London operators; 'Where to go, what to see'; Lists of vehicle types & garages of London Buses.
- 859 LEEFE, DAVID (ed). The London bus review of 1990. *London: London Omnibus Traction Soc.*, 1991. pp.108. Many photos. Review of events in 1990. (Note: From this issue, this annual publication is divided into two parts, with a separate volume for the London Country area — see 865 below.)
- 860 LONDON OMNIBUS TRACTION SOCIETY. London route review 1934-1939. Ed.by Les Stilton. *London*, 1991. pp.127. Detailed chronology of changes to London Transport central bus, tram & trolleybus routes, from the route renumbering in 1934 to W.W.2.
- 861 MILLS, G.R. and NICHOLSON, R.W. London buses in exile. *Newbridge, Midlothian: Bus Enthusiast*, 1991. pp.64. 90 photos. Lists of former London Transport buses surviving with other operators, or preserved.
- 862 MORRIS, STEPHEN and WATERHOUSE, R.J. The year of the Dart. *Buses Extra* no.70 (Apr-May 1991) pp.26-34. Bus operation in London in 1990, incl. large-scale introduction of Dennis Dart buses.
- 863 P.S.V. CIRCLE. Fleet history of London Transport MB class. *London*, 1991. pp.46,[12] pl. *Typescript. [Fleet history L713.]* Tabulated details.
- 864 ROBBINS, G.J. and ATKINSON, J.B. The London B-type motor omnibus. 3rd edn. *Twickenham: World of Transport*, 1991. pp.viii,152. Many photos, drwgs, fleet list.

- 865 STEWART, DAVID. Country area review 1990. *London: London Omnibus Traction Soc.*, [1991]. pp.72. Many photos. Review of the year's events. Covers the five companies formed from London Country Buses, and other operators in the same area. Succeeds the 'Country' section of *London bus review*, publ. 1973-85.
- 866 WESTGATE, R.G. Motor omnibus routes in London. Vol.3, January 1913 to February 1915. *Hatfield, Herts: Omnibus Soc., London Historical Research Grp.*, 1991. pp.100.
- DG2b Omnibus and coach operation** (See also no.361.)
- 867 BLACKMAN, TERRY S. Westbus in Kent. *Buses* vol.43 (1991) pp.302-3,406. Outline history of Westbus (U.K.) Ltd, coach & bus operator of Ashford, Kent and Hounslow since 1986.
- 868 BROWN, STEWART J. Bus review no.6. *Newbridge, Middlethian: Bus Enthusiast Pubing*, 1991. pp.48. A review of events in 1990.
- 869 BUBIER, D.J. Margate & District Motor Services. *Omnibus Mag.* no.381 (Nov/Dec.1991) pp.17-20. The history of a 'station bus' c.1931-c.1969.
- 870 BUBIER, DAVID J. East Kent and A.E.C. *Buses Extra* no.70 (Apr-May 1991) pp.41-6. Operation of A.E.C. buses by East Kent Road Car Co., 1950-90.
- 871 CORMACK, ALASTAIR and ANNE. Days of Orkney buses. *Kirkwall: Orkney View*, 1991. pp.128. 65 photos. History of bus services on the island since 1905.
- 872 COWLEY, IAN. Suffolkbus. *Buses Extra* no.72 (Aug-Sep.1991) pp.4-9. Rural operations of Ipswich Buses, 1986-90.
- 873 DUNABIN, J.E. Whitley, Stretton, and Warrington Motor Car Service. *Omnibus Mag.* no.380 (Sep/Oct.1991) pp.3-5. The story of a 1908 experiment.
- 874 GLADWIN, DAVID. Coaching cavalcade 1910-1970. *Studley: K.A.F. Brewin*, 1991. pp.[viii],96. Many illns. A pictorial history of motor coaches, and coach tours & services.
- 875 HALE, P.I. Warwickshire today. *Omnibus Mag.* no.377 (Mar/Apr.1991) pp.3-7. A review of bus services at the end of 1990.
- 876 HEANEY, GEORGE. Sixty years of A.1. Service. *Newbridge, Middlethian: Bus Enthusiast*, 1991. pp.48. 75 photos(8 col.),map. History of Ayrshire Bus Owners (A.1. Service) Ltd. With 1940 & 1991 fleet lists.
- 877 HEMMING, BRIAN and LITTLE, DAVID. Bus handbook no.3: Yorkshire. 2nd edn. *Harrow Weald: Capital Transport*, 1991. pp.136. Many photos.
- 878 HESKETH, P.J. Preston's pride. *Buses* vol.43 (1991) pp.393-7. Review of Preston Borough Transport Ltd since deregulation in 1986.
- 879 HOLMES, PETER. Odham Motor Services: the 'Nancy' Bus. *Camberley: author*, 1990. pp.40,[12] pl. Route map,fleet list. History of this Hampshire bus & coach operator, 1923-66.
- 880 JAROSZ, ANDREW. The rise & fall of the A.J.S. empire. *Buses* vol.43 (1991) pp.492-5. History of the short-lived A.J.S. Group of bus companies created at the privatisation of the N.B.C., 1987-91. At its peak it owned 14 operating companies.
- 881 JENKINSON, KEITH A. Buses mean business: Stagecoach and its subsidiaries, vol.2. *Bradford: Autobus Review*, 1991. pp.88. Many photos (4pp col.). Continues the company's history since Oct.1988.
- 882 JENKINSON, KEITH A. Best Bus: the final years of the Scottish Bus Group. *Bradford: Autobus Review*, 1991. pp.64. Many photos (4pp col.). Period: 1985-91.
- 883 KAYE, A.R. (comp). Riding with Hulley's of Baslow. *Chesterfield: Terminus Pubns*, 1991. pp.[48]. A photographic record of this bus & coach operator, with introductory essay by Tony Peart.
- 884 LACEY, P. Thames Valley: the Progressive episode. *Omnibus Mag.* no.379 (July/Aug.1991) pp.6-9. The history of one of Thames Valley's competitors, based at Bracknell, 1923-5.
- 885 MACDERMID, DAVE. Towards 2000: a look at the past, present & future of Grampian Transport. *Aberdeen: Grampian Regional Transport Ltd*, 1991. pp.32,[4] col.pl. 29 b.& w.photos. Historical background & review of the activities of G.R.T. and its antecedents. With table of routes & fleetlists. Sequel to Ott.1514.
- 886 MARSHALL, ROY. Trimdon Motor Services. *Buses Extra* no.71 (June-July 1991) pp.4-10. History of this Co.Durham bus & coach operator, 1922-90.
- 887 MARSHALL, ROY. Buses and biscuits. *Buses Extra* no.74 (Dec.1991-Jan.1992) pp.38-43. Influence of passenger transport managers on vehicle choice for municipal fleets.
- 888 MARTIN, COLIN F. A decade in Dean. *Buses* vol.43 (1991) pp.105-9. Changes in bus operations in the Forest of Dean, 1979-90.
- 889 MILLS, G.R. Taylor and the L.H. *Buses Extra* no.72 (Aug-Sep.1991) pp.19-23. Fleet policy of Taylor of Meppershall (trading as Reliance Coaches), Bedfordsh., 1951-89.
- 890 MILLS, G.R. Disappearing green at Melford. *Buses Extra* no.73 (Oct-Nov.1991) pp.38-43. History of H.S.Theobald & Son and Theobald's Coaches Ltd of Long Melford, 1926-91.
- 891 MILLS, G.R. The green gets brighter at Nayland. *Buses Extra* no.74 (Dec.1991-Jan.1992) pp.14-21. History of Norfolk's of Nayland, particularly since 1953 and its sale to Heddingham Omnibuses.
- 892 MORRIS, STEPHEN. Review of 1990. *Buses Extra* no.70 (Apr-May 1991) pp.5-19.
- 893 OXLEY, A.F. South Notts: the end of an independent era. *Buses* vol.43 (1991) pp.252-7. History of the South Notts Bus Co., 1926-91, sold to Nottingham City Transport.

- 894 P.S.V. CIRCLE. Fleet history of Ambassador Travel (Anglia) Ltd., Cambus Ltd., Viscount Bus & Coach Company Ltd. *London*, 1991. pp.43,[12] pl. *Typescript*. [Fleet history PF10.]
Tabulated details.
- 895 P.S.V. CIRCLE. Fleet history of Midland Red (North) Ltd. *London*, 1991. pp.44,[12] pl. *Typescript*. [Fleet history PD19.]
Tabulated details.
- 896 P.S.V. CIRCLE. Fleet history of Midland Red West, Midland Red Coaches. *London*, 1991. pp.50,[12] pl. *Typescript*. [Fleet history PD20.]
Tabulated details.
- 897 POTTER, BILL. National Express handbook. *Harrow: Wold: Capital Transport*, 1991. pp.80.
Lists of services & vehicles operated by each subcontractor to National Express. With a brief history of express coach services, since 1919.
- 898 ROBINSON, JOHN. The final harvest. *Buses Extra* no.74 (Dec.1991-Jan.1992) pp.22-37.
History of the final years of Crosville Motor Services, 1986-90.
- 899 SMITH, MARTIN. Cheltenham & Gloucester. *Buses* vol.43 (1991) pp.213-19,311.
Cheltenham & Gloucester Omnibus Co.Ltd since its establishment in 1983.
- 900 SNELL, PETER and OSBORNE, ALAN (comp). Westcliff-on-Sea Motor Services Limited in focus, vol.2. *Frinton-on-Sea: South Anglia*, 1991. pp.32].
A photographic record.
- 901 SOUTHDOWN ENTHUSIASTS' CLUB. 1991 fleet list of Southdown and Brighton & Hove, including Hastings Buses, Red Admiral, Blue Admiral, Brighton Buses and Eastbourne Buses. 20th edn. [n.p.], 1991. pp.72,[8] pl. *Typescript*.
- 902 STANIER, DAVID and PENLINGTON, DAVID. Stevensons DMSs: nearing the end of the road. *Buses* vol.43 (1991) pp.299-301,406.
Operation of ex-London Transport class DMS buses by Stevensons of Uttroxteter, 1979-91.
- 903 SWALLOW, K.W. Turning back the years. *Omnibus Mag.* no.372 (Spr.1990) pp.7-9.
Changes affecting municipal operators 1929-89.
- 904 SWALLOW, KEN. None to spare? *Buses* vol.43 (1991) pp.441-5.
Review of developments in Liverpool since deregulation of bus services in 1986.
- 905 THORNTON, DAVID. Just the ticket. [n.p.] [author?], [1989]. pp.74.
History of motor bus operation in N.E. Essex to c.1935.
- 906 TOWNSIN, ALAN. The British bus story: late 'seventies — calm before the storm. *Glossop: Transport Pubing*, 1991. pp.96. Many photos.
- 907 WARWICK, ROGER M. An illustrated history of the United Counties Omnibus Company. Pt.9, 1970-1973. *Northampton: author*, 1991. pp.85. Many photos.
- 908 WISE, G.B. The Lincolnshire Road Car Co. from formation to 1939. *Buses Extra* no.69 (Feb-Mar.1991) pp.5-12.
- 909 WOODWORTH, FRANK. East Kent: a history of East Kent Road Car Company Ltd. *Harrow: Wold: Capital Transport*, 1991. pp.88. Many photos.
Incl. its history since privatisation.
- DG2c-b Trolleybus and tramway systems**
- 910 RANSOM, W.P. Bournemouth trams and trolleybuses. *Bournemouth: Bournemouth Local Studies Pubins*, 1991. pp.ii,42,[16] pl.
Also covers early petrol buses. With fleet lists of trams & petrol buses. Orig. publ. in two parts.
- DG2c Trolleybus systems**
- 911 HALL, D.A. Reading trolleybuses: a detailed history of the trolleybus in Reading 1936-1968. *Reading: Trolleybooks*, 1991. pp.136,fdg route map. Many photos,diags.
- 912 KING, STANLEY S. Bradford Corporation trolleybuses. *Poole: Waterfront Pubins*, 1991. pp.112. 150 illns.
- 913 MURRAY, HUGH. Electrobus in York. *York Historian* vol.9 (1990) pp.68-84.
Battery-electric bus operation.
- DG2d Tramway systems** (See also nos.251,624.)
- 914 BARRIE, J. and WELLS, A.J. London E1 class 552-601. *Tramway Review* vol.19 (1991-2) pp.106-15.
A class of 50 London County Council trams, built 1929-30.
- 915 BETT, W.H. and GILLHAM, J.C. The tramways of the South Midlands. Ed. by J.H.Price. *Broxbourne: Light Rail Transit Assoc.*, [1991]. pp.48. 64 illns,14 maps.
- 916 BOWN, MARK. The Burton and Ashby Light Railways 1906-1927 on old picture postcards. *Kidworth: Reflections of a Bygone Age*, 1991. pp.37. 59 cards illus.
- 917 GILL, DENNIS. Heritage trams: an illustrated guide. *Cheadle Heath: Trambooks*, 1991. pp.48. 65 photos (incl.41 col.).
Guide to operating tramways & preserved tram collections.
- 918 GRAY, E. The Manchester to Bury tram. *Tramway Review* vol.19 (1991-2) pp.124-36.
History of tramways (proposed & actual) linking the two towns, 1877-1933.
- 919 GRUNDY, H.H. A short history of the Worcester tramways 1881-1928. [n.p.] [n.pub.], [1991]. pp.19. 7 photos,map.
- 920 JORDAN, H.E. The tramways of Reading. 2nd edn of Oct.1179. *Chetwode: Adam Gordon*, 1990. pp.96. 30 photos,route map.
Repr. of 1st edn with addl. author's note & appendices.
- 921 KELLETT, N.A. Tramways never built: the tramways of Worthing. *Tramway Review* vol.18 (1989-90) pp.232-7, vol.19 (1991-2) pp.28-14,61-70.
- 922 KIDDERMINSTER & STOURPORT ELECTRIC TRAMWAY COMPANY. Rules and regulations for officers & servants as from 16th March 1899. Facsim. repr. *Chetwode: Adam Gordon*, 1991. pp.58.

- 923 KIRBY, A. K. Manchester's little tram. 3rd edn of Ott 9188. *Manchester: Manchester Transport Museum Soc.*, 1990. pp. 44, fldg route map. 27 illus (6 col.).
- 924 KIRBY, A. K. Piccadilly. *Manchester: Tramway Review* vol. 19 (1991-2) pp. 137-52. Changing tramway layouts in Piccadilly and adjoining streets.
- 925 LANE, GEORGE. The Shooegles. *Glasgow: Richard Simlake*, 1990. pp. 56. 59 picture postcard scenes of Glasgow that include trams.
- 926 MARSDEN, BARRY M. Glossop Tramways 1903-1927. *Stockport: Foxline*, [1991]. pp. 48. 41 photos, map, facsim.
- 927 OAKLEY, E. R. London County Council Tramways. Vol. 2, North London. *Besley Heath: London Tramways Hist. Gp./Tramway & Light Rly Soc./Light Rail Transit Assoc.*, 1991. pp. 488-986, fldg route map. Col. frontis, photos, drwgs, plans.
- 928 OPPITZ, LESLIE. Tramways remembered: Eastern counties. *Newbury: Countrywide*, 1991. pp. 144. Brief histories of tramway systems in Essex, Suffolk, Norfolk, Cambridgeshire, Bedfordshire, Northamptonshire, Leicestershire, & Lincolnshire.
- 929 POLLINS, HAROLD. British horse tramway company accounting practices, 1870-1914. *Accounting, Business & Financial Hist.* vol. 1 (1990-1) pp. 279-302.
- 930 PRICE, J. H. The tramways of Grimsby, Immingham & Cleethorpes. *Broxbourne: Light Rail Transit Assoc.*, [1991] pp. 116, incl. covers. Repr. of articles on 'Great Grimsby street tramways' and 'The Grimsby and Immingham Electric Railway' in *Tramway Review* 1984-5 and 1988-9.
- 931 PRICE, J. H. The tramway exhibitions. *Tramway Review* vol. 19 (1991-2) pp. 4-10. Exhibitions of trams & equipment, 1900-12.
- 932 PROUDLOCK, NOEL. Leeds: a history of its tramways. *Leeds: author*, 1991. pp. 184, fldg route map. 57 photos. With details of liveries, rolling stock list, chronologies of openings & closures, & list of general managers in appendices.
- 933 PROUDLOCK, NOEL. A Leeds tram centenary. *Dalesman* vol. 53 no. 7 (Oct. 1991) pp. 65-7. Brief history of electric trams in Leeds.
- 934 ROBINSON, DAVID N. Lincolnshire tramways in camera. *Buckingham: Quotes*, 1991. pp. 80. 75 photos.
- 935 STADDON, A. The tramways of Sunderland. 2nd edn of Ott. 9353. *Sunderland: Northeast Press*, 1991. pp. 92. Many illus.
- 936 THOMSON, DAVID L. Spring disaster. *Scottish Transport* no. 46 (1990) pp. 13-17. Glasgow tramway accident, 1950.
- 937 TWIDALE, GRAHAM H. E. A nostalgic look at Leeds trams since 1950. *Kettering: Silver Link*, 1991. pp. 68. 139 photos, route map, city centre track diagram.
- 938 YEARSLEY, IAN and GROVES, PHILIP. The Manchester tramways. Rev. edn. *Glossop: Transport Publg.*, 1991. pp. 304, fldg route map. Many illus.
- DH ROAD TRANSPORT LABOUR AND LIFE**
- 939 DUNABIN, J. E. The campanologists. *Omnibus Mag.* no. 375 (Wntr 1990) pp. 11-12. A look back at conductors' duties.
- DH1 Biographical/autobiographical memoirs of road transport workers**
- 940 BURR, GERRY. Life with tippers in the Mendips. *Vintage Roadscene* vol. 7 (1990-1) pp. 62-4, vol. 8 (1991-2) pp. 26-30. Experiences of lorry driver in the Mendip limestone industry.
- 941 JOHN, KENNETH. Thankyou driver. *[n.p.] : author*, [c. 1990]. pp. 60. Reminiscences of a coach driver in East Anglia, 1920s-60s.
- DK ROAD TRANSPORT AND THE NATION**
- 942 BELL, PHILIP and CLOKE, PAUL. Public transport in the countryside: the effects of bus deregulation in rural Wales. In CHAMPION, TONY and WATKINS, CHARLES (ed), *People in the countryside: studies of social change in rural Britain*. London: Paul Chapman, 1991. pp. 125-43.
- DK2 Road transport and the passenger**
- 943 CHANDLER, JOHN. Accommodation and travel in pre-turnpike Wiltshire. *Wiltsh. Arch. & Natural Hist. Mag.* vol. 84 (1991) pp. 83-95. Examines relationship between roads & licensed premises in late 17th cent.
- DK11 Military road transport**
- 944 FLETCHER, DAVID. Mechanised force: British tanks between the wars. London: H.M.S.O., for Tank Museum, 1990. pp. viii, 130. 151 photos, 33 drwgs. Ch. 3 (pp. 26-35), Armoured cars.
- 945 FLETCHER, DAVID. Fighting lorries of World War II. *Vintage Commercial Vehicle Mag.* vol. 7 (1991-2). Great guns. pp. 68-71. Lorry-mounted artillery. The Home Guard. pp. 96-9.
- 946 SWAN, ROBERT and FLETCHER, GEOFF. British army transport & logistics. London: Ian Allan, 1991. pp. 128. Survey of the organisation, operational role & vehicles of British army logistical forces.
- 947 VENTHAM, PHILIP and FLETCHER, DAVID. Moving the guns: the mechanisation of the Royal Artillery 1854-1939. London: H.M.S.O., 1990. pp. vi, 126. 169 illus.