The Roads & Road Transport History Association

Contents

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The Trevette family and early omnibus operations in London

This paper is based on an account of the Trevette family. It is extracted from a longer (unpublished) family history, as an edited version in consultation with them.

The Trevette family history can be traced back to 1751 - if not earlier - when the great-great-great-great grandfather of Brian and Veronica, John, was born in rural Dorset. Of particular relevance to transport is the story of his son Robert, and in turn, his son John. John Trevett (as the family name was then spelt) was baptized [1] in the parish of Netherbury, about five miles north of Bridport, on 26 July 1751, being married in the same parish to Margaret Horsford on 7 September 1773. He lived his whole life in Netherbury, and he and Margaret had five children, including Robert. John worked as a carpenter and wheelwright, producing equipment for the agricultural community in the area. He died in 1827, being buried in St Mary's Church, alongside his wife. The 1841 census shows that there were then seven carpenters living in the village, along with others in trades such as shoemakers, masons and builders.

Robert Trevett

Robert, born on 26 July 1782, and his brother Thomas travelled to London in 1800 or slightly earlier. Thomas is recorded as marrying Mary Markenfield at Christ Church, Newgate Street, on 14 April 1800[2], and by 1802 was listed as a boot and shoemaker at 28 Artillery Lane, off Bishopsgate[3]. On 15 May 1804 Robert married Ann Bettess at St Michael Bassishaw Church on Basinghall Street, by the Guildhall [4]. Their first child, James, was baptized in the following year, but there are no subsequent records, suggesting that he may have died in infancy.

[1] Dates of baptism of John, his marriage, and Robert's birth, from Netherbury Parish Register

[2] From Parish Register

[3] Rotation Book for St Botolph Without Bishopsgate & 'Inhabitants of the City of London' (Guildhall Library); registration of son John's birth St Botolph's parish register; 1805-1808 Holdens Trinnial Directory; St Botolph Inhabitants 1801 – 1856 ms 4536 and 4537 (LMA)

[4] From Parish Register

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By 1805 Robert and Ann had also moved into the premises at Artillery Lane, Robert going into business[5] with Thomas as a shoemaker. Robert's daughter Hariett was baptized in 1809, followed by his son John in 1813. Although the younger of the two brothers, it became quite clear that it was Robert who had inherited his father's commercial acumen and he was forever eager to expand the boot and shoemaking business whilst, in addition, entering into a new undertaking. So it was in 1815 that Robert and his family moved into larger premises in Finsbury Street, and then onto newly developed up-market Finsbury Place South in 1819[6] (from 1829 to 1844 this was used as a commercial premises only).

The feather in Robert's cap at this time was his becoming a Freeman of The City of London, having been accepted by Redemption into the Company of Cordwainers in 1820[7]. Records show that he was also trading as a bookbinder and leather cutter[8]. Although Robert may have had a good head for business the same couldn't be said for the management of his personal finances. His generosity to friends led him into financial difficulties when loans couldn't be repaid; this in turn led him to the courts in 1825 on a conspiracy charge. Being found guilty and having to pay a heavy fine Robert found himself financially embarrassed and had no alternative but to apply for bankruptcy - this was in 1826[9]. However, he was able to avoid debtor's prison, and managed to continue his business activities.

Being a declared bankrupt undermined Robert's up-market boot and shoe retail activity from the front of 6 Finsbury Place South, and with that a loss of valuable income. This was covered in the short term with the introduction of additional leather cutting activities, but Robert was looking for a more

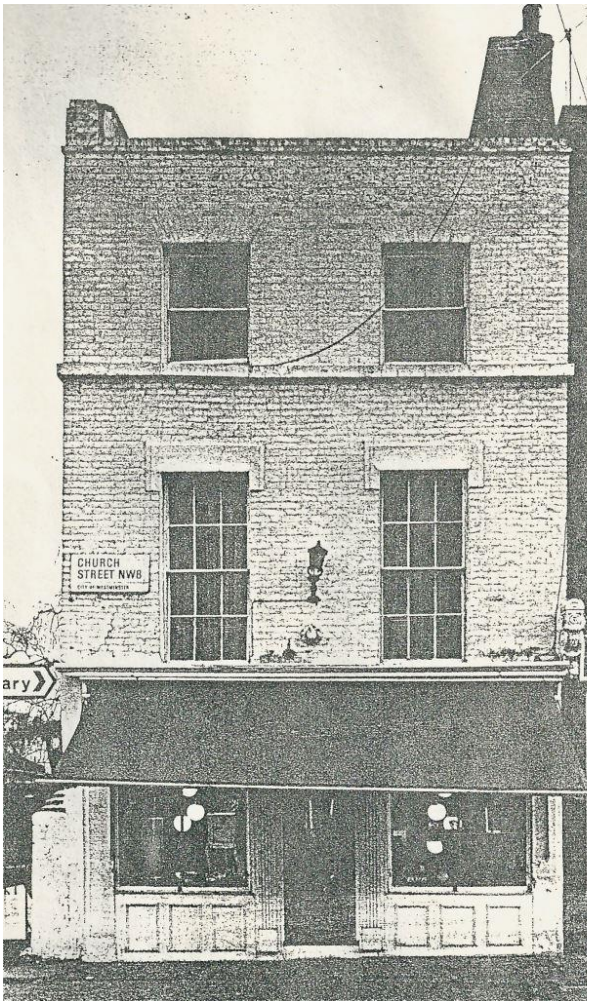
[5] Rotation Book for St Botolph Without Bishopsgate & 'Inhabitants of the City of London' (Guildhall Library); registration of son John's birth St Botolph's parish register 1813; St Botolph Inhabitants 1801 – 1856 ms 4536 and 4537 (LMA)
[6] Rate Assessment Register 1819 to 1827; Rotation Book (1819); Times and marriage of daughter Harriet 1826; Times, birth of Harriet's daughter Emma and Directory 1827; note suggesting not in residency from 1828; Poll Book and Robson's Directory 1836; Street Directory 1841; Tithe Records 1841 to 1843; Robert's will 1844
[7] Letter dated 2 August 1820
[8] Pigot's Metropolitan Directory
[9] London Gazette November 1826 and Bankruptcy Register

permanent alternative business. With his long term association with the local proprietors of the short-stage coaches, Robert was aware of the business potential of passenger transport and decided that this was the way to go, and with the support of other operators Robert set about establishing his new undertaking in 1828. Using the stabling facilities at his premises in Finsbury Place South, Robert began operating a short-stage coach on the Paddington to Bank Route. This was whilst Robert retained his boot and shoe manufacturing business, which was now run by his manager John Penny.

Arrival of the Omnibus

The following year saw the introduction by George Shillibeer of the Omnibus onto the streets of London. Operating the Paddington to Bank route along the New Road, the newly-introduced omnibuses were in direct competition with Robert's Short-Stage coach. Robert couldn't help but be impressed with the Omnibus and was aware that it represented a real threat to the viability of his business. Typical of the man, Robert decided to grasp the challenge by transferring his operation to the new Omnibus and went about replacing his existing short-stage[10]. Although continuing to use the stabling facilities at Finsbury Place South, Robert decided that he needed to be living in Paddington, the centre of this transport revolution. So he upped sticks and moved with his family, and that of his married daughter Harriet, to 52 Lisson Grove, Paddington. The novelty of the omnibus caused great excitement among Londoners. Songs about buses were written, to be performed both in the Music Halls and at home, around the piano.

By 1833 Robert's home was at 1 Church Street, a road running east from the Edgware Road north of what is now Marylebone Road. This move coincided with the transfer of his stables and coachyard to 43 - 48 Market Street (now St Michael's Street), which runs parallel to and south of Praed Street. In 1810 Paddington was a small village outside London, but as the population grew, it was gradually incorporated into London. In 1807 the Grand Union Canal had reached London at the Paddington Basin, and it was joined in 1820 by the Regents Canal, which progressed onwards through Camden to Islington. The New Road (later Marylebone Road) was also under construction. from the City out to the west, and new homes and businesses were appearing along it.



1 Church Street, Paddington

Robert was a shrewd businessman. He wasted no time. He was soon operating a number of coaches between Paddington and the Bank, and by 1833 he was described specifically as an 'Omnibus proprietor' operating three coaches In 1831 he was operating three coaches, numbered 4177, 4246 and 4043; in 1836 one coach, 3124[11]. His son John also joined the business. New omnibuses were now introduced, which were smaller than Shillibeer's design and drawn by two horses, making them more manageable through London's narrow streets. In 1836 Robert had just one coach, travelling between Kilburn and Bank, and John had seven coaches.

[10] Reference to Robert operating as a 'short stage' proprietor may be found in a report of the trial of John Dare, who was found guilty of theft, one witnesses working for Robert as a coachman in 1829, *The Times* 15 April 1830

[11] 1829 Old Bailey Proceedings; 1837 – Proceedings at Old Bailey

The buildings at 43-48 Market Street, Paddington (now St. Michael's Street) where Robert and John kept their horses and coaches. In 2010, this had recently been refurbished as apartments

When Robert decided to be part of this transport revolution, there was no guarantee of success. The operating costs were considerable. To keep a single bus on the road for a twelve-hour day, a team of twelve horses was required. Each horse was harnessed for three to four hours in a day, and travelled about 15 miles. Horses cost about £15 to buy and they needed to be fed, watered, stabled , groomed and tended by blacksmiths and vets. A carriage could cost as much as £100 to buy and the omnibus proprietor had to allow for significant wear and tear. A driver and a conductor (known as the 'cad') had to be employed to accompany each coach. To cover costs, a single fare of 1s. 8d to 2 shillings had to be charged for a journey to the City.

The operators' association

Very soon, many more operators had set up in competition, hoping to cash in on the new public transport. Within two years, 90 omnibuses were working the same route into the City. There were complaints about drivers racing each other to pick up fares, and there were fears for the safety of the public. A general account of the development of early bus services in London is provided in the standard reference work by Barker and Robbins[12], which indicates that an operators' association (Paddington Omnibus Proprietors) was set up in September 1831, with George Shillibeer as Chairman . Robert and son John were part of the central driving force of this organisation – no surprises there. In order to achieve a financially viable network of operators, the decision was taken to reduce the number of coaches from 90 to 57 and to recommend there be a three minute interval between buses. Inspectors were appointed to enforce the new rules. However, in 1835 a conflict developed between the committee and Aaron Bray, a new operator who did not join the committee, and competed directly with it (see more below).

During those first few years, omnibuses were banned from picking up and setting down passengers in central London, as hackney carriages had the monopoly, but from January 1832, 'short stages' were finally allowed to stop for passengers in the central streets anywhere along the route for which they had been licensed[13]. This encouraged many more new services to spring up, with rival bus operators competing for passengers. By January 1834 there were 376 licensed omnibuses and a further 423 'short stages' in the London area[14] and the competition was fierce.

Behaviour of both passengers and operators was reflected in colourful accounts by writers such as Dickens, and in some instances resulted in court cases. An account of May 5th 1835 in The Times indicates that Robert Trevett was summoned for driving his vehicle furiously along the streets. A Mr Wood stated that he came to the city in the defendant's omnibus. As they came along, the driver whipped on his horses and the vehicle swung from side to side. If it had come into contact with anything it must have overturned.

The passengers were in danger in several parts of the town, at the foot of Holborn-hill and in Cheapside. It was useless to appeal to the conductor, who, upon being requested to speak to the coachman said, "My dear fellow, you know nothing at all about it. The driver knows full well what he is about". The driver was fined one pound.

Houses at 50 and 52 Market Street, Paddington

[12] Barker, T.C. and Robbins, M. A History of London Transport, Volume One – The Nineteenth Century. George Allen and Unwin Ltd., London, 1963

[13] Barker and Robbins, *op cit*, page 25.

[14] Barker and Robbins *op cit*, page 26

Robert Trevett appeared in court again in September that same year as a result of the conflict between the committee and Bray. The case against Robert and the committee came to Court at the Old Bailey on September 21st, and it lasted five days. Several 'respectable shopkeepers' from Oxford Street, Cavendish Square and the Edgware Road gave evidence of frequent acts of 'violence' they had witnessed from both sides.

John Trevett spoke up for the group of proprietors, 'that which is erroneously called a committee'. He explained they were merely weekly meetings where proprietors could settle occasional disputes. He said that subscriptions were collected there to pay the time-keepers but that, to his knowledge, no subscriptions had been made there to oppose Bray. Mr Corney, the Deputy of Broad Street Ward, also spoke on behalf of the proprietors. He described the disturbances that had occurred outside the Bank in the past, caused by the 'mismanagement of the omnibuses'. He said he had notified the proprietors and suggested a set of regulations be produced to improve matters, and the proprietors had done this.

Market Street, Paddington, showing part of the former stables on the left.

William Budd, the time-keeper at the Bank, said there had been order and regularity on the stand at the Bank, until Mr Bray started his omnibuses in June. After considering the evidence, the Jury returned a verdict of guilty of conspiracy. Robert Trevett (always in the thick of it) and another proprietor, Thomas Bolton, each had to pay a fine of £100. Other defendants paid smaller fines. It was reported that: 'Mr Deputy Corney, who evidently entertained a strong feeling in favour of the defendants, was prepared to take upon himself the payment of the whole sum. This offer was refused, but it is supposed that the men who were fined £5 will be allowed to avail themselves of it' [Proceedings of the Old Bailey].

In the late 1830s, there was a steady improvement in the management of omnibuses on the roads, as proprietors agreed to abide by the regulations. The Trevett omnibus business was becoming profitable and successful.

In January 1836 Robert wrote to his brother Daniel in Dorset as follows (although this is an imaginative reconstruction, a number of the facts are drawn from a memoir prepared by Robert (the son of Daniel) in 1882):

1, Church Street, Paddington

My dear brother Daniel,

I was pleased to hear your news and to learn that you and Harriet and your family are in good health. You appear to be making a success of your workshop in Melplash. It is fortunate that your Robert works for you, allowing you to add the smithing business to your carriage trade. Do you employ the other members of your large family, too? You will have no need for additional workmen!

We continue in good health here in London. Fortunately, we have not been affected by the recent influenza epidemic, which took so many lives. As you know, Harriet and her husband William now have two young children, Emma and William. Our son John is now married to Ann Egles and has a daughter Ellen.

Our move here to Paddington has brought about great changes to our lives. I still have the Boot and Shoe workshop in Finsbury Square, which provides us with a good living which provides us with a good living and also supports our new venture into the omnibus business. John and I now have eight coaches, which provide transport into London for the City workers. We run our horses and coaches from nearby Market Street, as we have outgrown our former stables. It is a costly business, and there are many others competing for a living. As ever, I must keep my wits about me to stay ahead of my rivals.

You tell me that your son Robert wishes to make the journey to London. I can offer him accommodation here and for his part, he can work with John and myself and learn about the omnibus business. I am sure that his experience of the carriage trade will prove useful.

I send my regards to you and Harriet and trust you will continue to prosper in the New Year.

From your loving brother
Robert Trevett

The younger Robert seems to have inherited some of his Uncle Robert's spirit of adventure, for he was eager to see London and perhaps he was considering the possibility of finding work there himself. In Robert's words:

In 1836, I felt I should like to have a trip up to London and, as there were not railways, I had to go by stagecoach. I was in London a few weeks and as my uncle kept a lot of buses and horses running, and built his own, I assisted them in that a little"

In 1836, when young Robert came to visit, Uncle Robert and Aunt Ann were living in the recently built house at 1, Church Street, Paddington. Nearby, at number 2, lived their daughter Harriet, her husband William King and their two young children Emma and William. 23 year-old son John, his wife Ann and their baby Ellen also lived in Paddington, in Market Street.

Uncle Thomas and Aunt Mary had also moved to Paddington and were living round the corner from Church Street in Salisbury Street. Although Thomas's sons acted as drivers for their Uncle's omnibuses, Thomas himself remained a shoemaker.

Young Robert stayed in London with the family. During that time he would have discovered what life was like 'on the buses'. But he must have decided that living in London did not suit him, as after a few weeks, he headed back to Dorset to work for his father Daniel. It was almost 20 years before he returned.

Meanwhile in London, the omnibus business was thriving. This was a time of new developments and progress in many areas, including transport. In 1838 the first Paddington Station was opened. This helped boost business for John and Robert, as omnibuses were needed to collect passengers from the station and carry them into London.

By this time, John was gradually taking over more of the business from Robert, who was nearing the age of sixty. John and Ann were still living in a house in Market Street at this time, by the Trevett stables.

By the 1840s, John and Ann's family was growing. They moved from 46 to 52 Market Street in 1844. However, father Robert's health was beginning to deteriorate. He was found to be suffering from consumption. Tuberculosis, as we call it today, is a bacterial infection, which was a killer in Victorian times. The symptoms were high temperature, weakness, and coughing up blood. It can be successfully treated today, but in the 1840s, there was no medical cure. Robert and Ann moved in next door to John at no 50 Market Street, and Robert died there on 22nd April 1845, aged 62.

In his will, Robert's estate was valued at £800. The main beneficiary was his wife Ann, who, in addition to all the household articles, was to receive the interest from money invested in Government stock. The residue was to go to John, upon trust that he paid a weekly allowance to his mother. Robert also left £200 to his two grandchildren, Emma and William King. Robert's will was witnessed by Thomas Bailey. He was the landlord of the Fountains Abbey public house in Praed Street, just round the corner from Market St. and a popular meeting place for the omnibus proprietors

John Trevett

Robert's death was a significant loss for the Trevett family. Hard work and determination had enabled him to build up a successful passenger transport business which was then passed fully on to his son John. The inheritance from his father enabled John to move to a much grander house at 16 Warwick Villas[15], close to present-day day Little Venice.

On 21st May 1834 John Trevett had married Ann Egles, then aged 19, from Sussex, at St Pancras Old Church. During the thirteen years of their marriage she gave birth to eight children, but only three of them survived into adulthood: Ellen (born 1835), Lucy (1840) and John (1847). Ann did not recover from the birth of her eighth child John, and died on 5th May 1847. The infant and mother mortality reflects conditions in London at that time. After her death, John was left with four young children at home, but was wealthy enough to employ servants to take care of them and manage the household.

Two years after the death of his first wife Ann, John married Sarah Ann France, at St Giles Church, Camberwell, on 2 November 1849, who thus took on a ready-made family of four children, a not-uncommon occurrence in Victorian times. Her first child, Sarah Eloise, was born in September 1850.

The Great Exhibition of 1851 brought a great increase in traffic for bus operators in London. All fares were increased from three to four pence and buses returning from the Exhibition at night raised their fares to sixpence. Subsequently demand and

[15] Birth Cert of son John 1847; 1851 Census; Directory for 1852

fare levels fell sharply. By October 1851 between 200 and 300 buses were laid up. Fares were sharply reduced. By 1854 total mileage was less than it had been in 1850[16]. Nonetheless, in the 1850s John's omnibus business was doing well, profiting from introduction of the 'knifeboard' layout enabling upper desk seating to increase capacity, offering a cheaper ride than inside. Growth of the railways added to demand for bus services in central London.

By 1853 John and Sarah had moved to 19 Warwick Street [now 19 Warwick Avenue*]* where the family were to remain for the next 13 years. Sadly, in late 1854 their son Robert died while at boarding school in Margate, leaving four children in the household. However, Sarah gave birth to the couple's second daughter, Jessie, during 1855.

19 Warwick Avenue

Formation of LGOC

Significant change came in 1855 with the establishment of the French-owned London General Omnibus Company (LGOC) which aimed to buy out the existing operators and combine them into one business. A prospectus issued in 1855 named John Trevett as one of three of the four proposed district managers. In January 1856, it began the purchase process, an offer of £510 per vehicle proving attractive to most existing operators[17]. After a meeting of proprietors, chaired by John, they decided to accept the generous payments offered by LGOC, hostility to the proposals largely disappearing after it was announced that existing operating staff were to be retained.

The LGOC appointed four area managers from the companies taken over, John Trevett being responsible for the Paddington district at £400 per annum, later increased to £500. He was also able to carry on his own business as a job master until this practice was stopped at the end of 1859[18]. The list of omnibuses acquired by LGOC lists several routes by date of purchase, under the name of Trevett (i.e. all run by John)[19]:

Chelsea – Islington. 2 buses. 27 Jan 1856

Great Western Rly (presumably Paddington) – London Bridge. 3 buses. 21 Jan 1856

Kilburn Gate – Whitechapel. 2 buses. 21 Jan 1856

Kilburn Gate – London Bridge. 1 bus. 21 Jan 1856

Royal Oak – London Bridge. 1 bus. 21 Jan 1856

Royal Oak – Whitechapel. 1 bus. 21 Jan 1856

John remained in his post with the LGOC until the 1870s. The 1871 census showed that he and Sarah had moved to the house next door, at 21 Warwick Road. The family was smaller, as older children had married and only the two daughters born to John and his second wife Sarah remained. In 1876 John developed stomach cancer and he died[20] in October of that year, aged 63. He had continued working up to the time of his death.

John's death thus brought to an end a remarkable period for the Trevett family, starting with John, the wheelwright in Dorset, through Robert's move to London and establishing businesses there, followed by the younger John's role in the bus industry and LGOC. Further work on the family history is now in progress, taking the family back to its medieval roots in Somerset.

Brian Trevette and Veronica Hewson, with Peter White

[16] Barker and Robbins *op cit*, pp 61-63

[17] Barker and Robbins *op cit*, pages 77 and 79.

[18] Barker and Robbins *op cit*, pp 77-83

[19] Barker and Robbins, Appendix 3

[20] Will - probate 30 October 1876; Death Cert.

Wales on Wheels 2015

The ***Wales on Wheels*** event held in and around the Waterfront Museum in Swansea in May was blessed yet again with good weather and an excellent attendance. There were exhibits to appeal to everyone, classic cars, a fire engine, motorcycles, buses, historic vehicles and even a Wallace and Gromit van and motorcycle with sidecar. And that wasn't all, there was a horse (a major attraction), and - supplied by the Museum - a Sinclair C5 with pedals for children to drive around the site. The Museum also had the working model of the Penydarren Steam locomotive accompanied by Mr Trevithick himself.

A much more economical means of transport was shown, the Mouse Shell Mileage Marathon record holding car, as seen on Top Gear. This has done an amazing 568 miles per gallon using a variable speed automatic transmission, earning itself a place in the Guinness Book of Records. Just a few more miles to the gallon than the stylish pink Cadillac could do that was on display nearby. Just think, London to just a few miles short of John o Groats using only a gallon of fuel. The event was organised by John Ashley in collaboration with Swansea Bus Museum, The Waterfront Museum, and the Roads and Road Transport History Association.

Margaret McCloy

Two scenes from the event: a display from the Swansea Bus Museum, and preserved sports car GGG612.

Review

White Bus Services: Berkshire's oldest independent. Paul Lacey. April 2015. 160pp, paperback, card covers, extensively illustrated. ISBN 9-780956-783226. Available from the author at 17 Sparrow Close, Woosehill, Wokingham, Berks RG41 3HT <paul.lacey17@btinternet.com>, £20 post-free when mentioning this offer.

This very comprehensive history, written by one of our members, provides an account of the bus company itself, but also services in the adjoining area by other operators, and – as with past contributions by Paul Lacey - the intertwined history of the families and staff involved. Today, it is best-known for its Windsor - Ascot service which is unique in entering Windsor Great Park to serve residents of settlements within it. However, this was not the basis for the original operation, which served a similar route slightly to the west. Operation within the Park developed at the invitation of Eric Savill (now best known for creation of the Savill Garden within Park) in 1936. Early history of services in the area is traced from operation by the Great Western Railway from 1905, and later Thames Valley, White Bus making its first appearance in 1922. Since 1931 the company has been run by the Jeatt family, remaining independent over the whole period.

The fleet history is recorded in detail, together with changes in services offered. The role of private hire work and, especially in recent years, school services, within the overall activities of the company is made very clear. The history of the adjoining Winkfield Coaches business, merged with White Bus in 1990, is also covered. In addition to very extensive black and white illustrations, colour views are provided of more recent vehicles in the fleet, often set against locations within the Great Park, and a range of Bell Punch tickets. Extensive illustrations of past timetables, and a full historical fleer list, are included. The price represents excellent value. **PRW**

Death of a Bus Driver – The Western Front Comes to London

The author, Alan Kreppel, will be known to fellow members as a member of this Association. He followed his grandfather into the bus industry, holding management positions within subsidiaries of the National Bus Company, latterly holding the post of Managing Director of South Wales Transport, and retiring as Managing Director of Cardiff Bus. This article first appeared in the London Transport Museum News Winter 2015, and appears by permission of its editor. Illustrations credited as 'LT Museum' are copyright Friends of London Transport Museum. The article has also appeared (by permission of FLTM) in the Journal of The British Association of Friends of Museums (issue 113, Spring 2015).

The tragedy of death and destruction of the First World War in France and Belgium is well documented. There however is a more minor, but equally tragic, story of how the Kaiser decided to bring the same treatment to the civilians of England and particularly London from May 1915.

Driver Frank Kreppel is pictured on the far right of this group of LGOC employees at Willesden garage c1912/3 in front of B2117 (source unknown)

The Germans had been developing airships since 1900. At the start of WW1 the development and production of their Zeppelin airships was accelerated at the factory in Friedrichshaven on the shore of Lake Constance (now the home of ZF gearboxes - extensively used in trucks and buses). In early 1915 the Kaiser authorised their use to attack industrial and military targets in England and Europe. The first air raid on Britain took place on January 19th 1915 on Great Yarmouth followed by others on Norfolk, Tyneside and the Yorkshire coast. The casualty list of the first raids was not great, four killed and sixteen wounded. The effect on the civilian population, with no anti-aircraft protection was, however, close to panic.

By April 1915 the Kaiser agreed to extent the campaign to include civilian targets. London was bombed for the first time on 31st May. Seven people died and thirty five were wounded in the eastern and north eastern suburbs of the capital that night.

Hull was attacked on 6th June and twenty four people lost their lives in the undefended city. Rioting took place after the attack to protest at the government's failure to protect the city. It required the use of troops to contain the riot. With a further 'successful' raid on Tyneside on June 15th, the German High Command decided the time had come to concentrate Zeppelin attacks on London.

Zeppelins set out from their European bases to attack London on 9th, 12th and 17th August. None reached London until the night of 17th August, when Leyton was bombed killing nine and injuring forty eight people. In the process the Midland Railway station, tram depot and many houses were severely damaged or destroyed.

In spite of the ongoing casualties and damage, the British authorities had not developed any effective defensive response to the Zeppelin threat.

On the nights of 7th and 8th September two further attacks on London took place killing 42 people and injuring 129. Most destruction was caused on the night of the 8th September.

Commander of Zeppelin LZ 13, Kapitanleutnant Heinrich Mathy, reached landfall over Kings Lynn at around 20.45hrs. He followed the River Ouse and the Bedford Level to Cambridge in the twilight. From there he could see the lights of London and followed the road to Buntingford and Ware. He came into central London over Golders Green at around 22.40hrs, bombing from Woburn Square, Bloomsbury through to Lamb's Conduit Street, Gray's Inn Road, Smithfield Market and Farringdon.

At 22.59hrs he dropped the biggest bomb yet to fall on the City, weighing 660lbs, at Bartholomew Close. It narrowly missed St. Bartholomew's Hospital. The Zeppelin then proceeded towards the City of London, intent on striking at the heart of the British establishment, by bombing the Bank of England.

He failed to locate the Bank but came in over the Liverpool Street station area where he dropped a

bomb that detonated outside Broad Street station (just 50 yards from the entrance of Liverpool Street). The bomb detonated close to a no.35A bus. The driver was found wandering in the road, in a state of shock, with a number of fingers missing from one of his hands. The conductor was dead and the passengers either dead or seriously injured.

B804 after recovery following the bombing incident at Norton Folgate on 8 September 1915 (LT Museum)

Mathy and his crew continued bombing from LZ13, hitting a signal box at the station along with electricity cables and water and gas mains. To the north of Liverpool Street station, he dropped another bomb in Norton Folgate hitting a no.8 bus, belonging to the London General Omnibus Company (LGOC). It was operating out of Willesden garage (running no. AC22: vehicle registration no. LE 9347, fleet no.804 B-type). The driver Frank Kreppel, aged 27, died along with eight passengers.

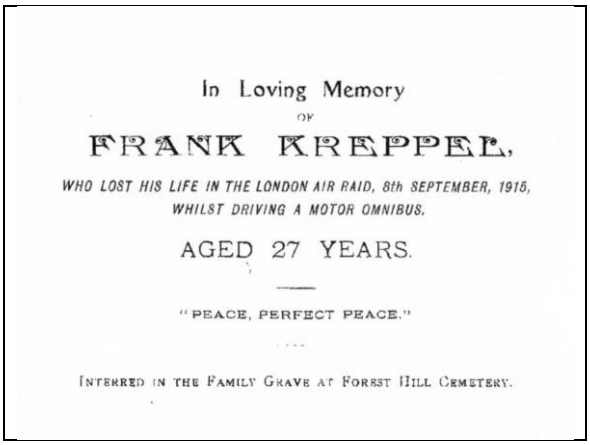
In just one night Kapitanleutnant Mathy and his crew had killed 22 people, injured 87 and caused damaged estimated at over £500,000 (in today's value over £100 million).

The driver of the No. 8 bus, Frank Kreppel was interred in his family's grave at Forest Hill cemetery.

Seven weeks later, on 28th October, his wife Edith gave birth to their firstborn son, named after his father, Frank. If the Government had been dilatory in protecting the citizens of London, the same could not be said of the London General Omnibus Company in supporting its employees and their families. The Company established a trust fund for Edith Kreppel and her son Frank to be administered for their benefit. It took the form of a weekly payment and 'sundry payments for maintenance and holiday expenses'.

There is a tragic irony in the events that took place on the night of 8th Sept. Frank Kreppel was of German descent. His paternal grandfather, named Franz, was born in Fusth Bavaria around 1823 and arrived in London aboard a ship from Hamburg in 1843. He married in Islington in 1857. His first child, Franz, was born in 1866. It was a family tradition that all first born sons were called 'Franz'. This was anglicised to Frank after the family became established in London.

'RTH81 B2014 funeral procession.jpg' - B2014 heads a funeral procession for a conductor killed by Zeppelin bomb whilst on duty. Since the bus displays 'Willesden' it is probable that this relates to the incident in which Frank Kreppel and his conductor were killed at Liverpool Street (LT Museum)


In Loving Memory
OF
FRANK KREPPEL,
WHO LOST HIS LIFE IN THE LONDON AIR RAID, 8th SEPTEMBER, 1915,
WHILST DRIVING A MOTOR OMNIBUS.
AGED 27 YEARS.
"PEACE, PERFECT PEACE."
INTERRED IN THE FAMILY GRAVE AT FOREST HILL CEMETERY.

The memorial card for Frank Kreppel.

Frank Kreppel and the conductor of the no.35A bus at Liverpool Street that night are believed to be the first bus industry employees to have been killed by enemy action on British soil.

Alan Kreppel

Coastal Roads and Climate Change: A Challenge for the Future

As reported in our previous issue, the main talk given as part of the March 2015 AGM was by Prof Mike Phillips, Pro Vice-Chancellor of the University of Wales Trinity St Davids, who has also joined the Association's committee.

His research in recent years has focussed on issues related to climate change: his talk focused on its impacts on coastal roads, and the challenges it poses for the future. The likely temperature increase will be between 2.0 and 2.5 degrees centigrade by 2050. For the UK, annual average rainfall is expected to remain roughly the same as at present, but there is likely to be a large difference in the patterns of summer and winter rainfall. Future sea level rise is likely to result in more severe coastal erosion, and inundation events will become more likely in low-lying coastal areas. Some natural variability will continue, for example an unusually cold winter with heavy snowfall. Despite this, average temperatures will continue to increase. Across the UK, the annual average rainfall is predicted to remain roughly the same as at present, with changes of between -10% and +10% by 2080, but a broad pattern of increases in the west of Wales and decreases in the east likely. However, there are likely to be large differences in the pattern of summer and winter rainfall, with decreases in the former and increases in the latter.

The impacts of sea level rise will vary greatly by country within Europe, ranging from a mere 0.04% of the coastline likely to be eroded in Finland and 2.5% in Sweden (due to presence of granite), to 37.8% in the case of Cyprus, the UK being at 17.3%. Of the 875 km of European coastline that started to erode within the 20 years up to 2010, 63% are located less than 30 km from coastal areas altered by recent engineering works.

Although focused on detailed impacts in Wales, his talk examined a worldwide range of very well-illustrated examples where increased coastal erosion has had major effects, such as on the KwaZulu-Natal coast in South Africa, where a storm in 2007 resulted in a maximum swell height of 14 metres, when an extreme wave event coincided with an equinox. Significant damage to property and infrastructure resulted. In England, the east coast between from the Humber to East Anglia saw a total extraction of about 163 million tonnes between 1989 and 2002, illustrated by the case of Happisburgh on the north Norfolk coast, where erosion has occurred over many years.

Coastal erosion can also threaten plans developed for other purposes, such as the Millennium Coastal Path created as part of the coastal development strategy in west Wales between Llanelli beach and Burry Port Harbour, funded by the Lottery. A storm in March 2007 resulted in a substantial part of the new path being lost, and if the path is completely lost within 75 years the Lottery funding will have to be repaid. Porthkerry Holiday Park in South Wales illustrated a case where holiday homes on the top of cliffs were threatened by continual erosion, raising the question of whether development at such points is sensible.

He observed that lessons from history are often forgotten, and that findings of the 1911 Royal Commission on Coastal Erosion and Afforestation of 1911 were now being rediscovered in recent published research work. The Commission had concluded that "Seawalls are agents of their own destruction", and today a debate continues about the value of retaining a 'sea view'. There are questions of the cost of protecting such views, who will pay, and who will decide on actions to be taken. Severe storms on the west coast of Britain in early 2014 had highlighted the risks, illustrated by the extensive damage on the seafront at Aberystwyth. A direct impact on public transport could be seen in the case of a Brodyr Richards bus ending up in a river, as shown below.

The principal causes of coast erosion can be seen as storms, sea level rise, the role of coastal infrastructure, and reduction in sediment supply/dredging. Responses include advancing the line of the coast (by seawalls, or 'nourishment'), holding the line by similar means, retreating from the line (i.e. relocating), or making no active intervention. The term 'nourishment' may be taken to mean strengthening the existing coastal structure through means such as placing rocks, or even paving over a beach, as evident in the case of Porthcawl (but is this an appropriate solution?).

erosion at Penarth beach

He presented studies of the erosion of Penarth beach between 1995 and 1997 (Penarth is located south-west of Cardiff, facing the Bristol Channel), as illustrated below. Erosion of the beach can be shown to be caused by increased wave attack from the north-east and south-east quadrants, generated by changes in wind speed, and significant changes in wind direction, and extreme sea levels. Monthly mean sea levels in the Bristol Channel and the Severn estuary rose by about 2.1 millimetres per year between 1920 and 2000, a similar trend being observed in the Cascais area in Portugal. He is also involved in work monitoring the coast at Tenby, and at Fairbourne on Cardigan Bay.

Looking at shoreline management overall, he saw the need for an enabling strategy to underpin decisions. Detailed analysis is required over shorter lengths of coastline or threatened coastal frontages. Seasonal beach level profiles should be taken at short intervals over at least three years (preferably five, the longer the better). These can be linked to data on changes in sea levels and wind/wave data over the same period to fully understand coastal processes and shoreline response at these locations. Subsequently, data on sea level rise and storm surges can be superimposed for more accurate predictions to be made, with the consequences modelled and visualised. From this, a realistic timetable of critical change can be identified. The financial implications can then be assessed, and costs compared with those of relocation. Although a managed retreat may be allowed at specific locations, in preference to incurring very high costs of protection, and as erosion continues there will ultimately be a point where we will 'hold the line', i.e. not to allow further loss. This will normally be when critical infrastructure is threatened.

In conclusion, he stated that we need to understand regional coastal dynamics (wave climate, sediment transport, etc). It is necessary to assess impacts of future change (sea level rise, frequency of storms, etc.) A realistic buffer zone between the road and the sea can be established, and 'soft engineering' solutions adopted, working with natural processes. It is important to learn from past mistakes, and costs are unavoidable.

PRW

Aspects of Bus History in India

In the process of my academic work at the University of Westminster (known as the Polytechnic of Central London until 1992) I made four visits to India, examining aspects of bus operations and transport planning in general.

The first of these was in August 1979 (providing an immediate introduction to the monsoon season), visiting Mumbai (then known as Bombay) and Pune (formerly Poona) in the state of Maharashtra. This in turn arose from a visit to the Polytechnic by a senior transport planning officer from Pune, W.R.Wakankar, which I had hosted in 1978, enabling comparisons of transport planning practice between India and Britain. It also provided my introduction to the role of the Central Institute of Road Transport (CIRT) in Pune.

A second visit was made in 1986, under the aegis of the British Council, to Viskhakapatnam (locally known 'Vizag'), principal port and industrial city of the state of Andhra Pradesh, on India's east coast. This was linked with transport studies in the School of Business at the University there, but also provided an opportunity to meet those involved in

bus operations, notably at the Andhra Pradesh State Road Transport Corporation (APSRTC, now the Telangana SRTRC). It should be mentioned that the states were restructured in 1956, largely to match areas defined by languages (Marathi, form of Hindi, in the case of Maharashtra; and Telugu in the case of Andhra Pradesh), replacing a more complex pattern of regional government (this in part reflected the roles of the princely states, which had retained their separate status under the 'Raj', until independence).

Some time after the Leyland name ceased to appear on new vehicles in Britain, it continued to be seen in India, through the products of Ashok-Leyland. Seen here is a semi-coach Cheetah of Maharashtra SRTC at Swargate Bus Station, Pune (which serves rural and interurban routes) in February 1997. (PRW)

My third and fourth visits, in 1997 and 1999, were made as part of a collaborative programme through the British Council involving Newcastle University and CIRT, enabling an exchange of visits between Britain and India by teaching and research staff. These provided further opportunities to observe operations in Pune and Mumbai, and also to visit Delhi, where the headquarters of the Association of State Road Transport Undertakings (ASRTU) – which celebrates its fiftieth anniversary this year - is located. CIRT provides training for officials from the publicly-owned bus industry in India, notably members of ASRTU, and also undertakes extensive component testing work on materials provided by a wide range of suppliers (such as lubricating oil, seat cushions, and brake pads) to ensure their suitability for purchase by operators.

Operations when I visited were largely undertaken by the state corporations, together with municipal bodies such as that in Pune, and the more extensive BEST, serving Mumbai, together with smaller private operators, mainly on express and rural workings. Ashok Leyland and Tata were the two principal providers of vehicles, many large operators running a mixed fleet. The 'Leyland' title clearly reflects past connections with Britain, which supplied many vehicles in the earlier stages of industry development. Today, the picture is in some respects reversed, with Optare in Britain being a subsidiary of an Indian company, although it is noteworthy that the recently-opened 'BharatBenz' plant in Chennai (formerly Madras) is a joint venture by Mercedes and Wrights of Ballymena, the latter providing bodywork.

My visits to India also provided the opportunity to gain some understanding of the history of bus operations there, notably through contact with Ch Hanumantha Rao, a senior member to staff at CIRT (now retired), who took the initiative in getting two senior retired members of the industry to recall their experiences, in publications issued through CIRT, namely M.A. Khambatta[21] and A.N.Salgar[22]. Text below is drawn from these publications. I am grateful to Ch Hanumantha Rao both for his efforts in arranging the original publications and commenting on this brief paper (together with supplying a list of state road transport undertakings by year of formation), and also Dr Sudarsanam Padam, formerly Director of CIRT (1990-2002) for consent to quote his recent paper on the case of road passenger transport in India[23].

This article is intended to set the scene for possibly more extensive articles on the role of the bus industry in India in future issues.

Principal Legislation and formation of state-owned undertakings

Early operations in India appear to have been developed on a small scale by private enterprise, but as in Britain expanded substantially after World War One. By the 1920s this unorganised road transport was seen as a potential threat to the railways, and the Mitchel-Kirkness Committee called for a controlled monopoly[3]. Subsequently, the Motor Vehicles Act of 1939, which took its inspiration from British legislation earlier in that decade, was based on the premise that road passenger transport would continue to be operated by an informal private sector, the role of regulating agencies being to spread the services evenly in

21 Flash Back – I. Khambatta's Memories of the Formative Years of State Transport. CIRT, 1995

22 Flash Back – II. A.N.Salgar on Karnataka State Road Transport Corporation. CIRT, 1996

23 Sudarsaman Padam 'Reappraising the relevance of public enterprise: the case of passenger road transport in India' April 2015.

relation to the traffic, and to discipline operations and driving through licensing[3].

A further view at Swargate, showing Tata-built vehicles (PRW)

However, a number of publicly-owned operations did develop, beginning in 1932 with the Nizam operation described in Khambatta's memoirs as noted below (many other princely states also developed road passenger transport operations prior to independence). This was followed in 1938 by the Trivandrum State Road Transport Department (later Kerala SRTC). 1942 saw the formation of Kutch SRTC (later merged with Gujarat SRTC), followed in 1944 by Sikkim Nationalised Transport. Rapid expansion took place from 1947, especially in 1948, including formation of the Bombay (later Maharashtra) SRTC, and corporations in Assam, Mysore, Orissa, Chandigarh, Lucknow, Calcutta, Delhi and Bihar. Municipal operations were set up in cities such as Pune (1950) and Thane (1989). A total of approximately forty such public corporations were established between 1932 and 1989, some subsequently merged. In the case of Tamil Nadu in southern India a somewhat different approach was adopted, with the formation of transport companies under public ownership, rather than directly-controlled SRTCs, beginning with Pallavan Transport Corporation Ltd in Madras (now Chennai) in 1972 along with three others in that year, a total of 16 such companies being established within the state. Today, some 53 state transport undertakings (STUs) operate in India, 24 road transport corporations, 7 municipal undertakings, 9 government departments, and 13 registered under the Companies Act.

The rapid growth in publicly-owned operations was stimulated by the Road Transport Corporations Act of 1950, aimed at the operating of an 'efficient, adequate, economical and properly coordinated' service (again echoing legislation in Britain), the word 'surplus' being preferred to 'profit'[3].

M.A.Khambatta's recollections

M.A.Khambatta was a science graduate who joined the then Nizam State Railway and Road Department as an Inspector in 1932, serving there until it became part of APSTRC in 1956. He retired as Deputy General Manager in 1964. His services were available not only for Hyderabad state, but also to Andhra state, as a result of states re-organization on linguistic basis. Before assuming higher responsibilities in India, he received training at London Transport.

He traced the origins of mechanical road passenger transport in Hyderabad (now capital of Andhra Pradesh) in 1932, as subsidiary of the railway. The 'Nizam's State Guaranteed State Railway' had been owned by a company in England, subsequently purchased by the Government of His Exalted Highness the Nizam in 1926 and renamed the 'Nizam's State Railway'. The railway was a substantial operation, running 4-6-0 locomotives, one of which is now preserved in Delhi[24]. The railway had been set up in 1870, to link Hyderabad with the rest of the network. It was the largest of the princely state railways to be taken into public ownership in 1950, then comprising 1375 miles. It became part of the Central Railway in 1951, which in turn was split in two parts in 1965, one, the South Central Railway, being headquartered at Secunderabad, the old headquarters of the Nizam's State Railway[25].

A Tata of Andhra Pradesh SRTC in Viskhakapatnam, operating in monsoon conditions with canvas rather than glazed windows, August 1986 (PRW)

[24] Michael Satow and Ray Desmond. Railways of the Raj, Scholar Press, London 1980. See illustration on page 112.

[25] Westwood, J.N. Railways of India, David and Charles, Newton Abbot, 1974, pp 56, 93-95.

Khambatta recalled that the State Railway was facing fierce competition from private road operators. The railway took over these operations in 1932, thus becoming the first state-based road passenger operation in India, initially under the name 'Road Mechanical Transport Services' under the commercial department of the Railway, until becoming a fully-fledged department of the railway in 1936, under the control of the Road Transport Superintendent. Staff were delegated from BEST in Bombay to provide initial expertise for newly-established services in Hyderabad, including depot provision, staff training, etc. The first city service commenced in June 1932 with four buses. He recalled that 27 petrol-engined Albion buses with a carrying capacity of 25 were ordered, fitted with wooden bodies. Initially two classes of accommodation were provided – 'upper' having cushioned rather than wooden seats, and at twice the fare - but this proved unsuccessful, a single class of accommodation being provided for all passengers subsequently. A few seats in the rear were provided for purdah ladies, screened off from the rest of the passenger saloon, creating considerable problems in ticket issue and inspection for staff.

It was originally planned to open three depots in areas outside the city, but to begin with only Nartketpalli depot in Nalgunda district, and that Kazipet, were opened, due to limited fleet size. Banjapalli depot followed in 1933, when some 23-seater petrol-engined Ford buses were purchased – however, these proved to be less robust than the Albions. Subsequent deliveries came in the form of more Albions (10 Valkyrie 32-seaters) and Leylands (10 34-seaters). In common with operators elsewhere, the fleet switched to diesel operation in the mid-1930s, although many problems were found with injector pumps and the quality of fuel then available. By the beginning of World War Two the fleet totalled 254 buses.

Fare scales initially varied widely from one district to another, but subsequently a standard distance-based scale was adopted, until wartime conditions compelled an increase in 1942. A large number of lorries were acquired during the war, being used mainly for transport of foodgrains.

Hyderabad became the second city in India to introduce double-deckers, following Bombay, with a fleet of 30 shortly after the war. Poor road surfaces were a constraint in operations in early years, although these gradually improved.

Separation from the railways following changes in 1951 (see above) came into effect from 1 September that year, the bus operation's head office being located at Mushirabad from that time. From 1951 to 1958 buses were operated under the Home Department of the Government of Hyderabad, and later Andhra Pradesh, then from 11 January 1958 onward as the Andhra Pradesh State Road Transport Corporation.

Khambatta's memories also covered aspects of human relations, including medical services and problems of ensuring staff discipline. He recalled with affection the Medical Department of the State Railways, under Dr Taylor as Chief Medical Officer, and District Medical Officer Dr Pulla Reddy. Both gained a reputation for being efficient and helpful to all the staff, Khambatta quoting examples from the experiences of his own family. Even after retirement to England, Dr Taylor was noted for sending Christmas greetings to every member of his hospital, from the topmost officer to the lowest sweeper, until his death.

A standard Tata single-decker of APSRTC in Hyderabad, August 1986 (PRW)

A.N.Salgar's viewpoints

A.N.Salgar joined the bus industry as an office trainee in May 1953, working initially with the then Bombay State Road Transport Corporation, being transferred to the then State of Mysore in 1956 when states were reorganised. After experience in several areas, he became Deputy General Manager (Administration) of the Karnataka SRTC from 1966 to 1969, and Deputy General Manager of Bangalore Transport Service 1971-74. He retired in January 1990 as Director (Traffic) of KSTRC. His recollections are mainly in the form of somewhat philosophical observations on various aspects of bus operations, rather than a chronological account.

Among the issues he reviews are issues of improving communications between different groups of staff in bus operations, including operating staff and night shift maintenance workers [a feature of bus operation in India which I observed on my visits was the very high vehicle utilisation attained, making it necessary to undertake much routine maintenance work overnight, whereas in Britain this would be covered between peaks, or by having more spare vehicles above the peak requirement]. Another question was that of allocating new buses to depots, striking a balance between demands for new vehicles by all depots, and maximising revenue for the operator as a whole. Movements at pilgrim centres also generate high peaks in demand, for which appropriate operating measures may be needed, such as 'double file' of buses to clear crowds at the end of major events.

Salgar also comments on the pressures on publicly-owned undertakings to meet highly-peaked urban demand, and to serve low-density rural areas that would not be attractive to private operators. Political pressures to constrain fares increases, or offer uncompensated concessions to certain sectors of the population likewise increase pressures on management [another feature of my visits was the considerable interest shown by bus managers in the concessionary fare compensation rules applying in Britain, which at least establish the principle of compensation for such decisions, rather than requiring cross-subsidies between different passenger categories]. He notes the case for a 'working timetable' for bus services analogous to that found in railways.

Today, the SRTCs face growing competition, both from private motor vehicle ownership (mainly in the form of two-wheelers, rather than cars) and private sector bus and coach operators. It is hoped to examine further aspects of the industry in India in a future paper.

Peter White

Double-decker operation in Hyderabad, August 1986. On the left an Ashok-Leyland four-wheeler, with to the right an articulated vehicle (PRW)

Correction

In the Article 'Municipal Pride' in Journal 80 (at page 9, column 2), I stated that banking hours were 9.30 a.m. to 3.30pm; E. Keith Lloyd helpfully points out that banking hours were even more restricted – actually 10 a.m. to 3 p.m. I agree, and apologise for not adequately checking this. **Roger Atkinson**

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The deadline for material for the next edition of The Journal is 7 October

Please refer to the separate leaflet for details of our next Business Meeting on **Saturday 24th October**