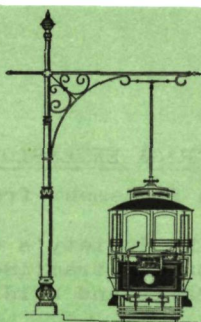


TROLLEY WIRE

Magazine of the
SOUTH PACIFIC ELECTRIC RAILWAY
and
AUSTRALIAN ELECTRIC TRANSPORT
MUSEUM

Registered at the G.P.O., Sydney, for
transmission by post as a periodical.

THIRTY CENTS



AUGUST 1970



TRACK EXTENSIONS AT LOFTUS

A Statement from the Board of Directors.

The Society's submissions in relation to extension of the Museum tramline are currently being examined by the National Parks and Wildlife Service.

These submissions are now being considered in conjunction with future planning proposals for the area. As these proposals have not as yet been finalised by the various departments concerned the Board is unable to finalise plans for extensions at this stage.

It should be understood, however, that all reasonable approach has been made to the authorities concerned in an endeavour to reach a solution acceptable to the Society.



Visitors to the Museum at St. Kilda park their cars on the former Lines Road, and then pass by the inspector's cabin where entrance fees are collected, and continue into inspect the display.

SPER - NOTICE OF MEETING

A General Meeting of the South Pacific Electric Railway Co-operative Society Limited will be held on Friday 30th October, 1970 at the Railway Institute, Devonshire Street, commencing at 7.45 pm.

At the conclusion of general business there will be screened a programme of New Zealand railway films by visitor John Roveen.

COVER: Thirteen R and R1 class cars are visible in this view along King Street, Sydney on 4th December, 1950. Also visible are the signal cabins at George Street, Pitt Street and the ground level box in the foreground at Castlereagh Street. A northbound O car can also be seen disappearing along George Street bound for the Quay or Millers Point.

TROLLEY WIRE

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AUGUST 1970

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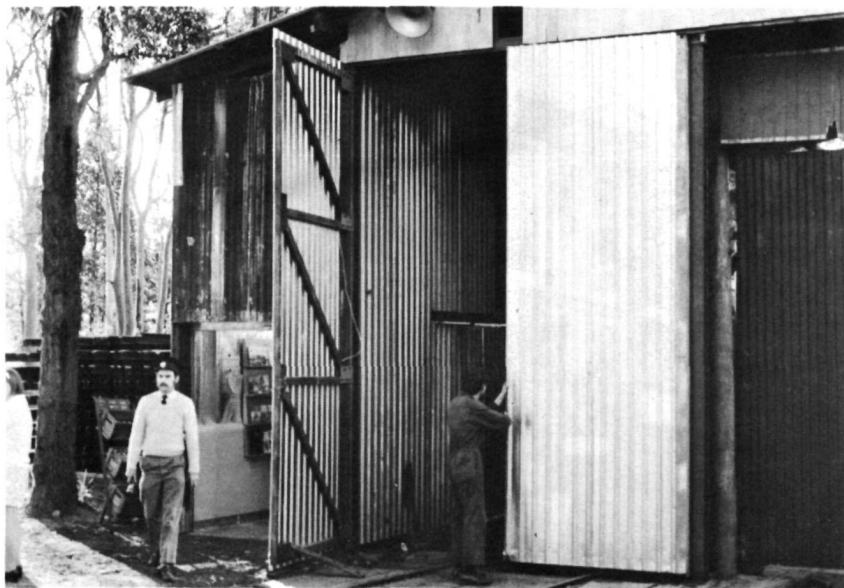
NEW MEMBERS.

The Board and Shareholders of the SPER welcome the following members to the Museum:-

Michael Whitehead	233
Allan Leaver	234
Andrew Howlett	235
Robert Phillips	236

The Committee and Members of the AETM welcome the following member to the Museum:-

R.L. Jenkins



New construction at Loftus includes new doors on road 1 and sheeting the wall between the bookshop/office and the main depot area. Work has already commenced on construction of new doors for road 2.

ELECTRIC TRACTION RETURNS TO FERRYMEAD

On Saturday, 9th May, 1970 the electric tramway at Ferrymead Historic Park, Christchurch, was officially opened for service by the General Manager of the Christchurch Transport Board, Mr. J.F. Fardell.

The steam tram and the quaint double deck trailers, which have operated over the tramway for two years, have had a fascination all of their own, particularly for the children, but to the many hundreds of people who rode the trams in Christchurch each day many pages of history have been turned back with the return of the electric tram.

Trams in Christchurch ceased in 1954 and the type which the Tramway Historical Society restored to open the service was phased out in 1953. The tram - one of the one-man or pay-as-you-enter type familiar on the Sumner, Brighton and Riccarton services (as well as other routes) - came to the Society as a derelict 'bach' (a New Zealand term for sleep-out), minus all electrical, mechanical and air equipment. However, after months of world wide searching all the equipment has now been located and, after some five years of restoration work, Brill No.178 is once again complete and ready to run.



Mrs. Fardell cuts the ribbon prior to Mr. J.F. Fardell declaring the electric service open. The President of the Tramway Historical Society, Mr. A.J. Pickering is on the right.

Photo courtesy Green & Hahn Ltd.

Prior to the opening day the Society invited some 40 ex-tramway motormen to the Park, and if the memories that have been stirred in the minds of these men are anything to go by, many people will be in for a trip down memory lane when once more they ride an electric tram in Christchurch, New Zealand.

BTMS OBSERVES ANNIVERSARY

The first anniversary of the closure of the Brisbane Tramways was celebrated by the members of the Brisbane Tramway Museum Society with the operation of prototype drop-centre car 231 under its own power along a short length of track.

The operation of 231 at Ferny Grove replaced the scheduled entertainment at the April meeting of the Society. Operation was achieved using a vintage Plymouth 4 cylinder car engine driving the motor from trolleybus No.1 as a generator. The trolleybus motor replaced a 15 hp motor which had proved inadequate for the task in hand. The motor/generator set has been used to test compressors on various cars since October, 1969, while 231 was tested under power for the first time on 22nd February. The unit will be used to operate the Society's 600 volt equipment such as compressors and welders for maintenance and construction work.

Some fifty members and friends were present for the occasion including AETM President, John Radcliffe and SPER General Manager, Dave Rawlings.



231 at Ferny Grove on 10th April, 1970. The operation of the car marked the observance of the first anniversary of the Brisbane tramway closure.

Photo: Ken Smith



THOMAS WEARNE

(1834-1914)

This year, 1970, marks the 90th anniversary of the delivery of the first eight wheeled bogie tramcars made in Australia. It was during 1880 that Thomas Wearne delivered several bogie tramcar trailers for the infant Sydney steam tramway system; one of these cars was built to the end loading saloon design, but the others were constructed to the enclosed cross seat toastrack style, a design, with several refinements, which was to be the standard Sydney tramcar body pattern until the appearance of the "R" type saloon electric cars in 1933.

Thomas Wearne was a 19th century Colonial industrialist in the same class as Hudsons, H. Vale, Atlas Engineering Works and Vale and Lacy, who not only had to contend with the difficulties of pioneering secondary industry in a young colony less than 100 years old, but had to fight the pastoral lobby as well as the Free Trade orientated (in N.S.W.) population.

Thomas Wearne, the son of Joseph and Susannah Wearne, was born on December 15th 1834 in the small engineering town of Hayle in Cornwall. The family arrived in Sydney in 1851 and soon after Joseph Wearne purchased an established flour mill in Moore Street, Liverpool which, with the aid of sons Thomas and Joseph, soon expanded into a successful business.

At this time Thomas Wearne became an active layman in the Methodist Church and, for the rest of his life, he held various lay positions at Liverpool, Cabramatta, Glebe and Hay Street, Sydney.

On 15th December, 1855 he married Miss Janet Jeffrey of Liverpool. Mrs. Wearne was a native of Glasgow from where she had migrated with her family in 1841 at the

age of three when her father took up a position at St. Andrew's Presbyterian College.

In 1865 Wearne launched a hardware and manufacturing business at 609 George Street, Sydney. The success of this venture is best illustrated by the fact that during the years 1868 to 1870 he held the contract for the supply of ironmongery and engineers' stores to the N.S.W.G.R.

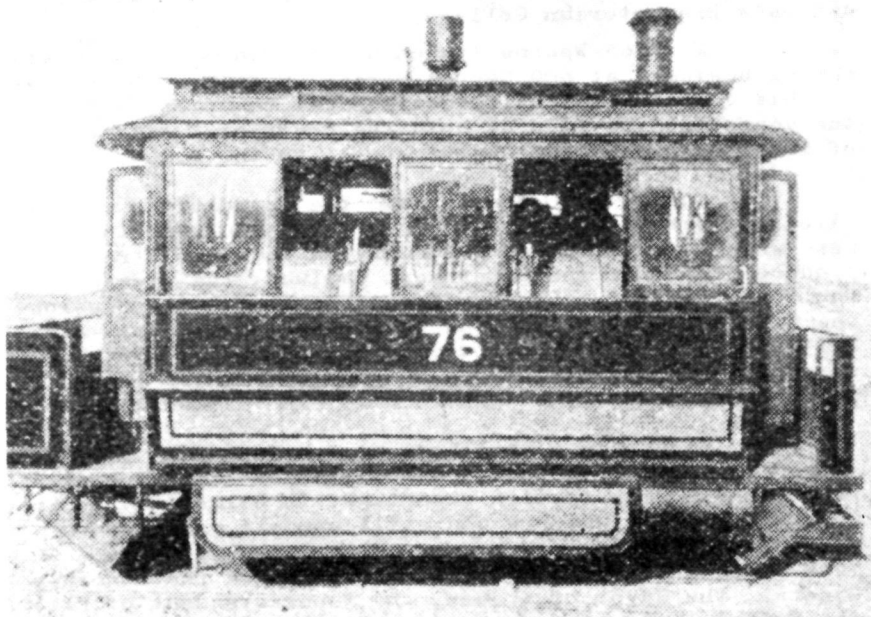
During 1870 Wearne laid the foundations of his fireproof safe, strong room and grille manufacturing business when he established a foundry in Bathurst Street, to produce items for the Government Railway, the Treasury, Public Works Dept., Lands Office, Clerk of Petty Sessions, the Colonial Post Office and the Government Savings Bank, all items which had been previously imported. This business expanded rapidly beyond the premises which caused the undertaking to move to larger buildings in Sussex Street.

To convince the local businessmen that the Wearne safe was superior to the imported item of similar cost, a promotional demonstration was staged in Belmore Park, Sydney, of a nature which would still compete with modern methods devised by present day advertising agencies. On 17th June, 1871, under the watchful eyes of the Attorney General, the Mayor of Sydney, the Superintendent of Pilots, the Superintendent of Government Stores and the Colonial Surveying Engineer, one of Wearne's safes, together with a similar imported product from Milners of England, were packed with letters and papers, then covered with 15 tons of billet wood saturated with coal tar and ignited. The



The railway sidings at Newcastle about 1890. The car at the left is believed to be a 6-wheel Wearne-built vehicle.

Photo: G.O. Hyde from Ken Magor collection.



Steam motor 76 was built by the Wearne company to the standard Baldwin design used in Sydney. It had an 0-4-0 wheel arrangement and 10"x16" cylinders.

Photo: John Shoebridge collection

pile "burned with a terrible violence for a period of two hours, during the whole of which time the safe was subjected to the most intense heat attainable". Those present testified that "upon the extinction of the fire, the safe was opened with some little difficulty and the contents found to be uninjured in the slightest degree".

This demonstration, together with later similar displays, caused Mr. Wearne's safebuilding business to prosper. In fact, this continued to be his major business until the time of his death in 1914. From 1885, Wearne's safe construction business carried on under the name of Breakspear and Co. (for possible reasons which will be related after) when William Breakspear, Thomas's nephew became a passive principal of the undertaking, but after 1894 the firm was again renamed "Wearne and Breakspear" and continued as such until 1914.

During the mid 19th century the NSW Government Railways made the policy of awarding local rollingstock builders business under 5 year contracts. This had the dual aim of encouraging local builders with continuous work

and enabling the Railway Dept. to order wagons and carriages at short notice as track extensions and traffic increases demanded. At this stage the world wide railway construction boom caused long waiting lists in the order books of the established British firms and this was the case to a lesser degree in Germany and U.S.A.

The firm of P.N. Russell and Co. of George and York Streets, Sydney, had satisfied some of the carriage needs of the NSWGR from 1865 and by the 1870's Russell's employed 850 men in a workshop valued at £250,000 (\$500,000) At this time the firm was plagued with industrial unrest and when a second major strike took place in 1874 the factory closed its doors never to reopen. The family continued its profitable machinery merchant interests, however after this date.

Thomas Wearne realised that an opening now existed in the rollingstock passenger car field and by 1878 he had established a large woodworking and engineering business at 46 Cowper Street, Glebe. It is possible that Wearne completed five carriages for the NSWGR in 1875 which had been abandoned by Russell and Co., at his Sussex Street shops.

What appears to be Wearne's second rollingstock construction project was the manufacture of 58 "D" type four wheel open goods wagons in 1877. The metal underframes and body hardware were fabricated in Wearne's Sussex Street plant while the timber parts were produced by the coach-



An official photograph of the first bogie tramcar built "in the Colonies" which later became B-class 9. The length is given as 36 feet with a clear height inside of 7'6". The caption on the original photograph gives the seating capacity as 64. Actual capacity appears to be 56, being reduced to 48 in 1883 when the car was divided by a partition to seat 20 first class and 28 second class passengers.

Photo: C. Bayliss from Mrs. E. Chadwick collection

building firm, Frederick Kellaway of Mitchell Street, Glebe. Frederick Kellaway was an itinerant tradesman who established his workshop at Glebe in 1877, by 1883 he had moved to Liverpool Road, Ashfield and just prior to closing his business in 1885 he worked from Hassell Street, Parramatta.

Prior to the establishment of the Glebe works in 1878, Wearne's private residence was located in Pitt Street Redfern but to be close to the new engineering shops the family home shifted to Elizabeth Cottage at 123 Derwent Street, Glebe.

In July, 1878, eleven 6 wheel radial carriages built by Thomas Wearne at the new Glebe plant entered service on the NSWGR and over the following 12 years Wearne continued to supply rollingstock to the Colonial Government for their Railways and Tramways and to other privately owned undertakings. (see table)

Between 1887 and 1889 some 11 steam trailer cars, built by Stanfield and Carey in 1884 for the Sydney tramways as 108 to 118, were transferred to Newcastle. These were bogie enclosed crossbench vehicles of the C1-class designed to seat 60 passengers in 5 compartment and on two end platforms. These appeared in Newcastle with the open end seats and platforms removed, possibly to enable them to be shunted round the the tightly curved reversing triangles when coupled to the combination cars. Contemporary Newcastle records indicate that the body alterations to these trams were carried out by Wearne before they entered service on the northern tramway. In February 1892 these vehicles were numbered



A steam motor and double deck Wearne trailer enter Pitt Street from George Street at what is now known as Railway Square.

Photo: Mrs. R. Roberts collection

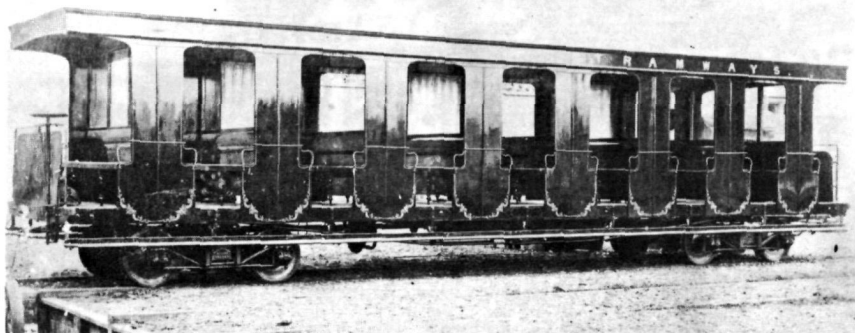
RAILWAY & TRAMWAY ROLLING STOCK PRODUCED BY THOMAS WEARNE

TOTAL No.	ROAD No.	IN SERVICE	GENERATOR	CLASS	DESCRIPTION	NOTES
58	-	1877	NSWGR	D	4 wheel high sides open goods truck	F. Railway constructed wooden bodies F. Wearne constructed metal running gear
11	30-36 168-198	1878-9	NSWGR	BM	6 wheel radial, first class passenger coach	30,31,32,35,35,178,184,194 to work cars. Renumbered 776,784,790,793,794, 837,798,150,151,152,153 respectively. Withdrawn 1910-31
1	9	1880	NSWGR	B	8 wheel bogie single deck end loading saloon tram trailer seating 56	Withdrawn 1888
1	10	1880	NSWGR	C	8 wheel bogie single deck cross bench steam tram trailer without doors seating 80	Withdrawn 1888
4	17-20	1880	NSWGR	C	Ditto - seating 70	Withdrawn 1888
20	21,22, 24-41	1881	NSWGR	A2	8 wheel bogie double deck steam tram trailer, lower deck cross bench seating 60 upper deck halfboard seats seating 30	Some, perhaps all, reduced to single deck 70 seat cars after 1885. Withdrawn 1893-99
14	81-94	1882-3	NSWGR	A3	4 wheel double deck steam trailer, lower deck cross bench seating 40, upper deck halfboard for 20	Later fitted with 2x4 wheel bogies. Withdrawn 1888-1901
1	99	1883	NSWGR	C	Identical to car 10	Sold to Parramatta steam tramway 1888. Withdrawn 1893
6	101-106	1884	NSWGR	D1	Body portion of double deck self powered steam tram. Lower deck cross bench seating 40, upper deck halfboard seating 40	Converted to single deck seating 40, to Newcastle June 1887. Engine portions numbered 71-75, one extra car portion built. Cars allocated 2A-7N Feb 1897 but only 4,5 & 7 received these new numbers. Withdrawn 1896
1	107	1884	NSWGR	A2	Similar to car 21 Ac.	Withdrawn 1899
4	5-8	1886	NSWGR	-	4 wheel and loading saloon cable trailers with centre doors on bulkheads	Withdrawn from North Sydney cable service 1900 and used for electric trailers for a short time
1	1	1884	NSWGR	X	8 wheel bogie 1000 gallon steam hoist water sprinkler trailer	Withdrawn 1890
1	2	1884	NSWGR	X	Ditto - 2625 gal capacity	Renumbered 37a in 1906, W'drawn 1930
1	76	1884	NSWGR	10*	0-3-0 steam motor 2/10x10" cylinders, 2'6" dia wheels	To Newcastle 1887, renumbered 7N. Number 109A later allocated, not retained.
1	97	1886	NSWGR	10*	Ditto	To Newcastle 1887, renumbered 8N. Number 110A later allocated, not retained. 7N & 8N withdrawn 1905
1	-	1885	-	-	0-2-2 miniature steam loco, 2' or 2'6" gauge	Used for pleasure rides at the Sir Joseph Banks Hotel Zoo at Botany. Parts possibly used in construction of loco at Arncliffe Sewer Farm railway, 1886
3	-	1885	-	-	Narrow gauge trailers with knifeboard seats	Used at Sir Joseph Banks Hotel pleasure railway
1	1	1883	P-MATTA	-	8 wheel bogie double deck steam tram trailer, lower deck crossbench seating 60 upper deck knifeboard 30	Converted to single deck 1891, rebuilt by Sydney Trams 190, 1908 to seat 70 on single deck. Body burnt January 1907
5	7	1883	P-MATTA	-	4 wheel open goods trucks and vans	Possibly lasted until 1945 on Sydney Carries tramway

NOTES:

* Sydney steam tram motors were originally classified by diameter of cylinders, hence these units were known as "ten inch motors"

See written section for details of partial work on: 4 locos for NSWGR, 2-8-0 "J-522" class
11 steam tram trailers for NSWGR Newcastle lines
5 carriages for NSWGR from P. Russell contract



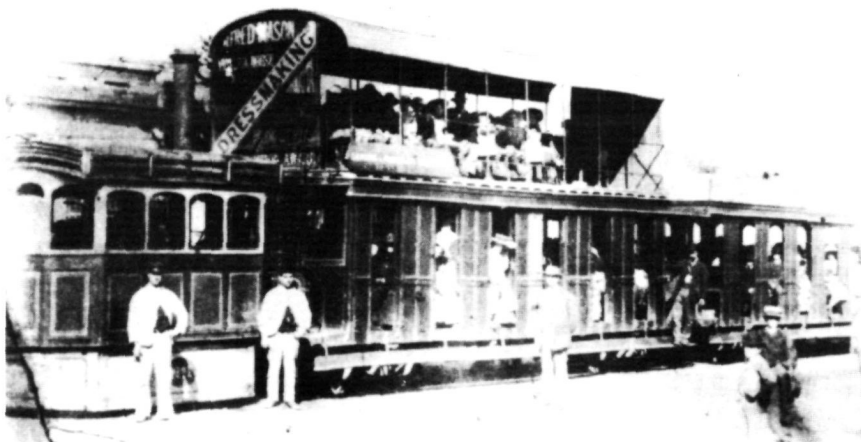
80 seat crossbench car 10 was the first locally built open tramcar with bogies and set the standard body pattern for the NSW Tramways until the introduction of the R class cars in 1933. Like B9, it was 36 feet long with an inside height of 7'6".

Photo: C. Bayliss from Mrs. E. Chadwick collection

9N to 19N respectively, but records indicate that only 9, 11, 12, 14, 17 and 19 carried these new numbers at that stage.

During the 1880's the Wearne foundry was also engaged in the production of columns, brackets and other hardware needed for a major programme of wharf reconstruction around Sydney. During 1883 the firm also carried out the civil engineering task of constructing the 3 miles of standard gauge steam tramway between Redbank Wharf and Parramatta Park Gates for Mr. C. Jeanneret. This undertaking finally came into the hands of Sydney Ferries Ltd., in 1900, who continued its operation until 1943.

The rise of the boom decade, which burst in Melbourne after 1890, causing severe depression, bankruptcy and hardship, was launched by the staging of the opulent Melbourne International Exhibition staged from October 1st 1880 in the new Exhibition Building built at a cost of £250,000. The manufacturers in the colony of N.S.W. were well represented at this exhibition and included the display by Hudson Brothers of Redfern of a railway sleeping car and a tramcar, while Wearne exhibited his patent chilled tramcar wheels and axles as well as a complete tramcar. At this period the union of the N.S.W. and Victorian railway networks had not taken place so the transfer of this rolling stock was undertaken by sea with wagon haulage to and from the docks.

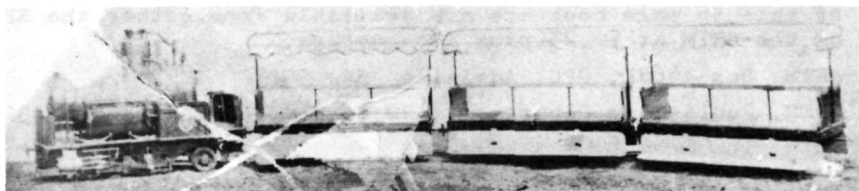


The Parramatta tramway's Kitson steam motor No.1 with the Wearne built 90 seat double deck trailer and the 80 seat single deck car, also built by the Wearne works. The 80 seat car was purchased secondhand from the Government tramways in 1888 and was completely devoid of any windows, doors, or partitions!

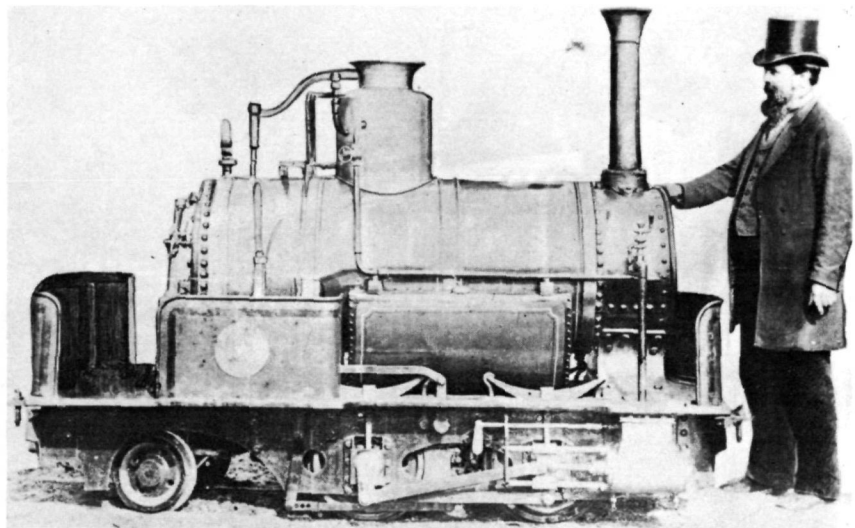
Photo: Mrs. E. Chadwick collection

At this exhibition the Hudson tram on display was the ornate bogie end loading saloon vehicle which later entered service on the Sydney tramways as number 23 of the B-class in 1881. This car carried the popular name of the "Palace Car" no doubt due to the extra decoration and embellishments of its interior when compared with other vehicles of the same class. It is not yet clear just which tramcar Thomas Wearne displayed, but a possible contender would be one of the double deck "A2" cars which later carried numbers 21, 22 or 24 in Sydney.

....to be continued



A very mutilated photograph showing the complete train used on the Sir Joseph Banks Hotel miniature railway. The trailers appear to be four-wheelers and a simple link and pin coupler was used. Photo: Mrs. E. Chadwick collection



The narrow gauge 0-4-2 locomotive built by Wearne's for the Sir Joseph Banks Hotel pleasure railway. The design of the locomotive appears to be based on that of a Sydney steam motor without the enclosing superstructure.

Photo: Mrs. E. Chadwick collection

"PROCEED TO PETERBOROUGH"

In their latest book "Proceed to Peterborough", the authors of "700" and "500" ---Douglas Colquhoun, Ronald Stewien and Adrian Thomas have prepared a pictorial tribute to the 400-class Garratts and the T-class 4-8-0 locos which worked the narrow gauge lines on the South Australian Railways' Peterborough Division and which enjoyed a brief but glorious return to activity before being retired at the closing of the lines.

The book contains 70 fine photographs, with no less than 8 in full colour, together with an informative text. Copies of this 56 page book are now available from either the SPER or the AETM at \$2.25 plus 10c postage.

AETM, Box 1468L, GPO, Adelaide, SA, 5001

SPER, Publishing Department, PO Box 103, Sutherland, 2232



Ballarat 18 at Mount Pleasant terminus on 6th June, 1970. The tram carried advertising for the Ballarat branch of the Jaycee's campaign to "Keep Ballarat Beautiful" from 6th June to 13th June.

Photo: Bob Prentice

"L.C.C. TRAMWAYS HANDBOOK"

As would be expected of a tramway network as extensive and diverse as that which grew up in London, it has not been possible to adequately cover the full story in a single volume. To date, reasonable coverage has only been given to a number of areas on the periphery of the network which formed semi-independent systems due to their independent origins.

Forming the hub which joined all the outer groups into one unit and which eventually became a unified system under the London Passenger Transport Board were the Tramways of the London County Council.

This publication is essentially a quick reference book which, although complete in itself, will prove an invaluable companion to those dealing with the other former independent systems into whose story the LCC invariably intrudes.

In methodical and sufficient detail this book covers the background, development, physical plant, rolling stock, services and tickets. Also mentioned are street furniture, uniforms and tramway managers. The foldout map is well drawn and quite readable, only one small area being somewhat lost in the reproduction. This is a change from many British tramway maps which are generally crammed with lines authorised but not built, or lines projected but not authorised.

The 56 illustrations together with diagrams and ticket reproductions are generally of high quality, particularly when one considers that all the photos were taken prior to 1st July, 1933 when the LPTB assumed control.

Overall, this book gives a good insight into this interesting and complex segment of the now almost vanished British tramway scene from which it stood out by the extensive use of conduit current collection, although to Australian eyes the trams themselves are hardly distinguishable from the majority in that country.

---L.P.G.

(LCC Tramways Handbook by 'Kennington', 96 pages 8 $\frac{1}{4}$ " x 5 $\frac{1}{2}$ ", card covers -- available from the SPER Publishing Dept. shortly.)

BACK PAGE: Illinois Terminal 415 stands at the terminus of the Illinois Railway Museum in 1967. The car is an excellent example of a lightweight suburban car. Built for the Chicago, Ottawa and Peoria in 1924 as their No. 64, the car was moved to the Illinois Terminal Railroad in 1934 where it was altered for one-man operation and renumbered 415. The Illinois Railway Museum acquired the car in 1956.

Photo: Ed Wojtas

ILLINOIS RAILWAY MUSEUM

BEWARE OF TRAIN

WILCOX

415

FRONT ENTRANCE

