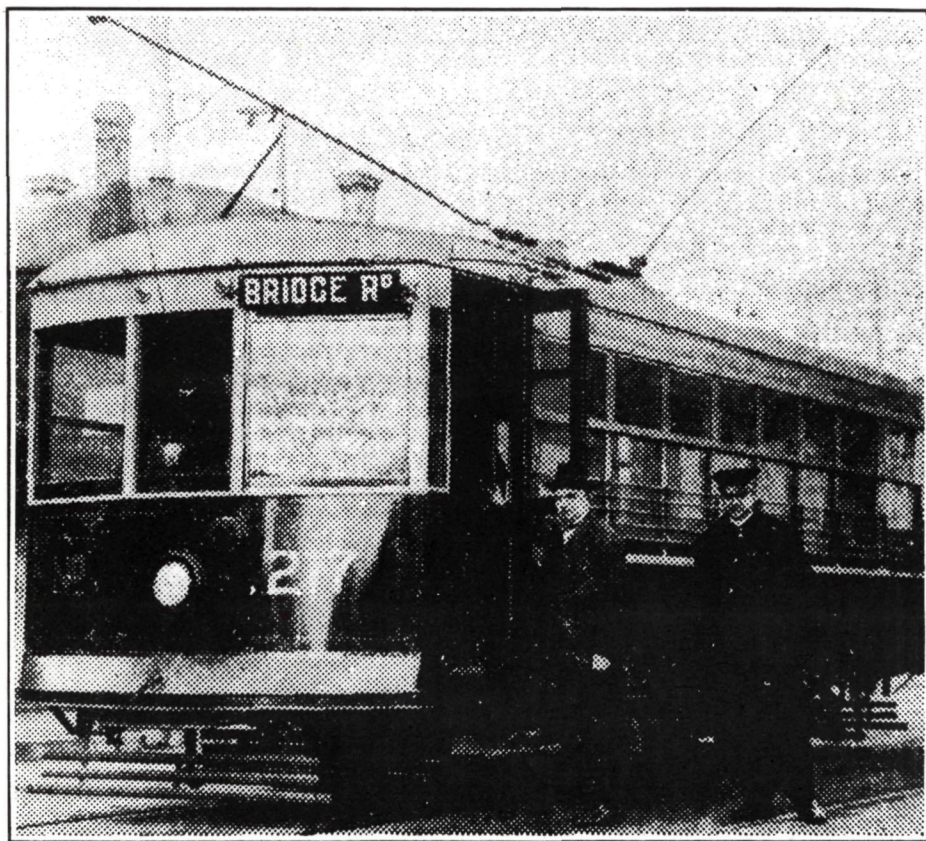


# TROLLEY WIRE

Journal of  
AUSTRALIAN TRANSPORT MUSEUMS

NUMBER 152  
JUNE 1974



**THE BIRNEY CAR IN AUSTRALIA – FIFTY YEARS**

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# TROLLEY WIRE

Journal of

- SOUTH PACIFIC ELECTRIC RAILWAY
- AUSTRALIAN ELECTRIC TRANSPORT MUSEUM
- WESTERN AUSTRALIAN TRANSPORT MUSEUM
- BALLARAT TRAMWAY PRESERVATION SOCIETY
- ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY
- STEAM TRAM PRESERVATION SOCIETY
- TRAMWAY MUSEUM SOCIETY OF VICTORIA

**JUNE 1974**

New Series Vol. 15 No.3 Issue No.152

## A SPECIAL ANNIVERSARY

*The 19th July will see the tenth anniversary of what was possibly the most important event in the whole history of electric tramway preservation. For on that day in 1964, LP class car 154 became the first car to operate on museum trackage using museum power in Australia.*

*Eight months were to pass before regular electric tram passenger services could be introduced, but from that hesitant beginning, when 154 moved slowly along the track has grown an undertaking which carries an average of some 24,000 passengers a year and operates some 1,400 tram trips in the year to carry the people, and what is more, does it all for the pleasure of performing the task, and not with any great sense of commercial gain. To those pessimists who said 'it couldn't be done', we offer these facts as evidence that the enthusiast transport museum can and will succeed.*

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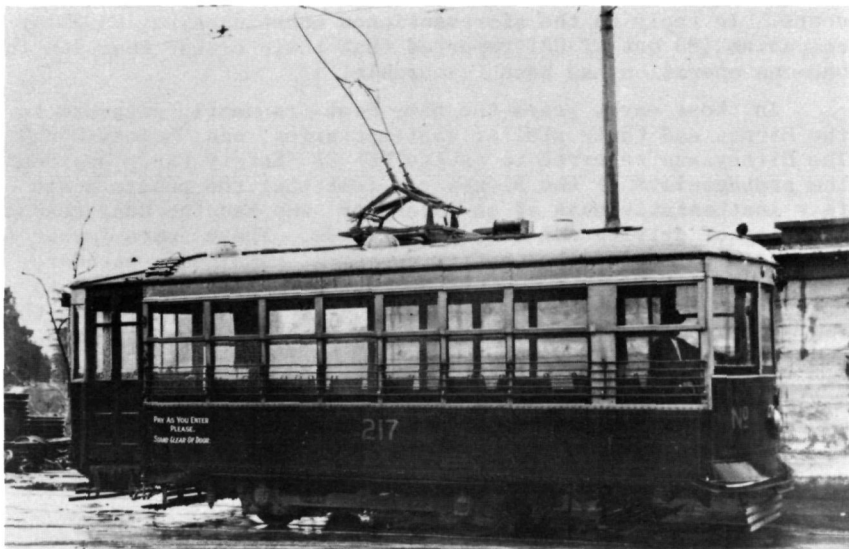
This was to have been the first *TROLLEY WIRE* in the new format, but once more our plans have been somewhat foiled. The Production staff ask that you bear with us for the time being, since the first steps are already underway. Although we are really 'having a ball' at the moment, we could do with the assistance of a reader who lives handy to West Ryde and who is an experienced linotype operator. If you can help please contact Laurie Gordon or Bill Denham as soon as possible.

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FRONT COVER: A contemporary newspaper photograph of Birney Car 218 (MMTB X class) on its first day in service, 10th June 1924.

--Mal Rowe collection

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## THE BIRNEY CAR IN AUSTRALIA - FIFTY YEARS

by Malcolm Rowe

10th June 1974 will mark the Fiftieth Anniversary of the entry of Birney Safety Cars into public service in Australia. Thus it is an appropriate time to review the history of these sturdy little cars.

\* \* \* \* \*

In 1916, many streetcar systems in the USA were in the 20 to 30 years age group. Cars and track were beginning to show their age, but finances were generally short. As they had done before, and would do several times more, the managements sought a miracle to save them from ruin.

Their miracle did not arrive, but many a system achieved a temporary reprieve due to a car designed by Mr. Charles O. Birney designing engineer of the Stone and Webster Management Association, which operated several streetcar companies.

(Most city cars in use in the USA by that stage were bogie vehicles, heavy, consuming large quantities of electrical power and most were two men operated.)

The lightweight properties of the new car considerably reduced both power costs and track maintenance. In reply to a questionnaire prior to the Atlantic City Convention of 1919, streetcar companies stated that power consumption was down 51.2% to 1.5 kWhr/mile. (1)

One man operation was the obvious way to reduce running costs as, even then, crew wages were a large proportion of the

costs. In reply to the aforementioned questionnaire, 89.2% of companies (83 out of 93) reported that their crews' reaction to one-man operation had been favourable!

In those early years the name most frequently attached to the Birney and their similar contemporaries, was "Safety Cars". The Birney was referred to as the 28' 0 $\frac{1}{2}$ " Safety Car. Apparently the protagonists of the Birney car felt that the public would fear inattentativeness of an 'operator' who had the dual responsibility of driving and collecting fares. These fears appear to have been unfounded, but safety equipment remained a standard feature on new Birneys. Doors and brakes were interlocked so that doors could not open, nor the coupled steps drop down, while the car was in motion. Similarly, if the door was open, and the step down, the car could not move.

The following extract, a masterpiece of understatement, serves to describe another safety feature, the "dead-man's handle"

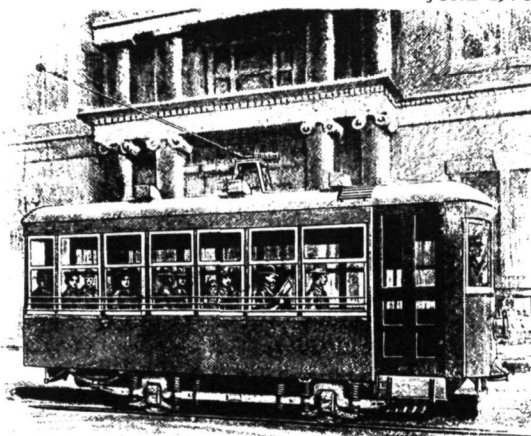
"The dead-man's handle requires that the operator have his hand constantly on the controller or it would throw off the power. Similarly, if power were thrown off, the brakes would be automatically applied and sand fed to the track, and, when the car comes to a stop, the doors, previously held securely closed by air pressure, are made available for manual operation to form emergency exits if desired".

The mechanism for "throwing off the power" referred to above was a source of amusement to enthusiasts in later years. It con-



A furry Birney.... Bendigo No.28 in Nolan Street carrying one of its many guises as advertising tram - as Myer's 'Santa Special' in December 1968.  
-Bob Prentice.





An advertisement, circa November 1916, showing an early Brill-built Birney car.

—Mal Rowe collection

Brill cars of the one-man type include an extra light-weight design known as the Birney One-Man Car as it was designed by Mr. C. O. Birney, Designing Engineer of the Stone & Webster

Management Association. With a seating capacity of thirty, the weight of the body, less electrical equipment, is but 4,050 lb. A light but powerful steel bottom frame, steel plate side-girder construction and continuous tee-posts, provide a substantial support and an ample resistance to all strains so that long life and maintenance costs are insured. A double-leaf entrance-exit door operates pneumatically in conjunction with the step. At the rear is an emergency swing-door secured by manually- and pneumatically-operated locks. Bulletin 223 fully describes and illustrates the car.

THE J. G. BRILL COMPANY  
PHILADELPHIA, PA.

AMERICAN CAR COMPANY  
ST. LOUIS, MO.

G. C. KUHLMAN CAR COMPANY  
CLEVELAND, OHIO

WASON MANUFACTURING COMPANY  
SPRINGFIELD, MASS.

sisted simply of an air operated piston with what looked like a boxing glove on the end. In the event of the safety gear operating, air was admitted to the piston and the 'boxing glove' came smartly forward to strike the handle of the circuit breaker and thus opened the circuit and cut off power.

The American Electric Railway Association produced the following accident data:— (2)

OPERATION	2 MAN	1 MAN	% REDUCTION
Number of Accidents	45	32	29
Cost	\$US10699	\$US7541	34
Personal Injuries	83	44	47
Collisions With Other Vehicles	207	196	5.17

Asked whether any accidents were traceable to one-man operation, six out of eighty-four companies replied --YES, but added that the operator had failed to observe the 'rules'.

Purchase price of the safety cars varied from \$4500 to \$7000, but was generally \$6000. They could be purchased on the basis of 20% cash and the balance in equal monthly instalments with interest at 7% on deferred payments covering a period of five years. This arrangement must have aided many small companies to purchase the cars. One wonders how many companies failed within the five years -- or had cars repossessed! There has been speculation that the cars supplied to Australia were in fact rebuilds (for left hand operation) of re-possessed cars. There appears to be little or no evidence for this hypothesis.

The number of cars purchased steadily increased in the four years following 1916 and then declined as can be seen from the following table:- (3)

YEAR	1916	1917	1918	1919	1920	1921	1922	1923	1924
Orders for New Cars	187	280	644	1383	1699	565	772	312	103
Progressive Total	197	467	1111	2494	4193	4758	5530	5842	5945

In 1919, 69% of all city cars ordered in the USA were Birney cars!

The decline of the Birney cars was due to several factors. Initially, sales dropped off as the market became saturated. The single truck motion was their downfall in many cities. They were often used in peak traffic -- for which they were not designed. They did not acquit themselves very well and were often, and unjustifiably, ruled as useless. By the 1940's, the only Birney cars in service were working low-load shuttle services etc. and these soon disappeared.

## BIRNEYS IN MELBOURNE

On the morning of 5th June 1924, a small number of people were present in Power St., Hawthorn to witness the first run of a Birney Safety car in Australia. No.217, in chocolate and cream livery, with two trolley poles and a destination board reading 'BRIDGE RD' was tested and demonstrated to the gentlemen of the press. These were particularly impressed by the large windows which gave an "uninterrupted view of the landscape". (4)

Five days later, on 10th June, No.217 went into regular service on the Power St. -- Hawthorn Bridge shuttle service. It seems likely that No.218 entered service the following day. The cars were an immediate success. It was reported that "the one man trams recently placed in operation on the Power Street line at Hawthorn had given complete satisfaction..... The construction of the cars is comfortable." (!) (5). One can only assume that particular reporter was well self-padded, or overcome with the technical splendour of the car. As anyone who has travelled on a Birney can testify, to call hard wooden slat seats "comfortable" is indeed poetic licence!!

The cars did not keep their double trolley poles for very long. On 19th and 20th respectively, they had the trolley poles

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Interior of crossbench Birney No.29 (above) and longitudinal seat Birney No.15 (left) taken at Bendigo depot, 10th April 1950 by Keith Kings.

replaced and single bow collectors fitted. Trials with these were not successful, (the collectors apparently 'bounced' at high speed) and the cars were later fitted with a single trolley pole each, circa mid 1927. At this time the Birneys were no longer Melbourne's only safety cars. Seven X1 class cars had been completed and Y class No.469 was about to enter service. All of these cars and the later X2 and Y1 class cars can trace their origins to X class Nos. 217 and 218.

When 217 ran trials in June 1924, it was suggested by the press that 218 might enter service on the Point Ormond section. In 1928, both cars were transferred to Glenhuntly depot to operate the Point Ormond shuttle service, a task they shared with an X2 or sometimes an X1 car in later years. From 1928 until the mid 1950's the Birneys provided a reliable service on this section.

Early in 1956, 217 was transferred to Footscray Depot for the Russell St. service, but saw little duty. During a major overhaul in 1953, No. 218 received a hardboard ceiling and had the 'dead man' equipment removed from its controls. The two cars also saw much use on the all-night trams services over an extended period. On replacement of this service with a (much curtailed) bus service in February 1957, the Birney cars became redundant and were withdrawn.

It was intended to donate both cars to the Victorian School for Deaf Children at Burwood, but following representations by the AETA, 217 was held for preservation. No.218 weathered badly and by 1969 had become a hazard to the children. It was dismantled, yielding valuable parts for the TMSV.

No.217 has been fully restored, all the work having been carried out at the rear of the old shed at Malvern depot, the exact place where the two cars were assembled fifty years ago. By special arrangement, the car ran over MMTB tracks again, last January, for the benefit of Society members, and behaved in true Birney style. (The Americans didn't call them "Galloping Gerties" for nothing!)

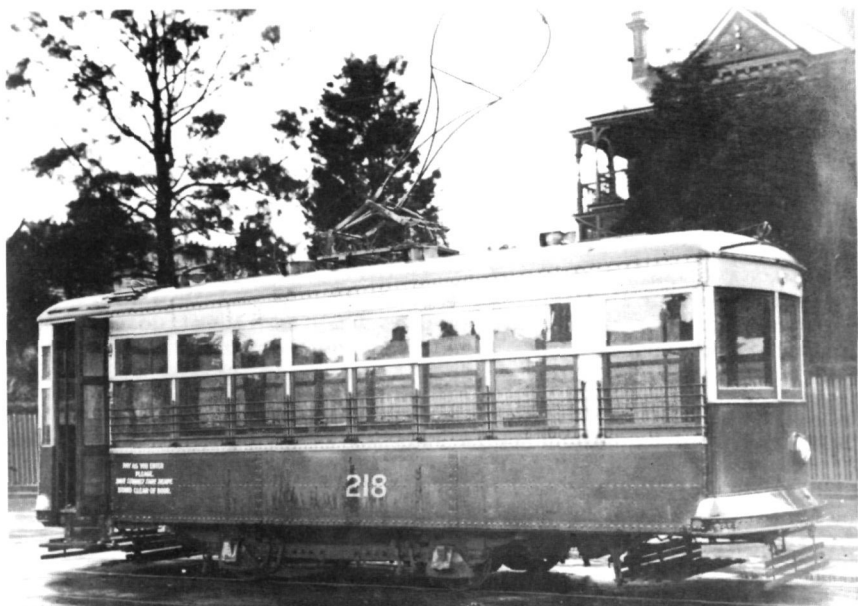
The Birney cars have never been an important part of the Melbourne tramway scene. However, they have proved sturdy and efficient little cars, part of a world wide caste, and 217 has well earned a place of honour in the Bylands museum.

#### OTHER AUSTRALIAN BIRNEYS

Three other tramway operators have used Birney Safety Cars in Australia, in three cities.

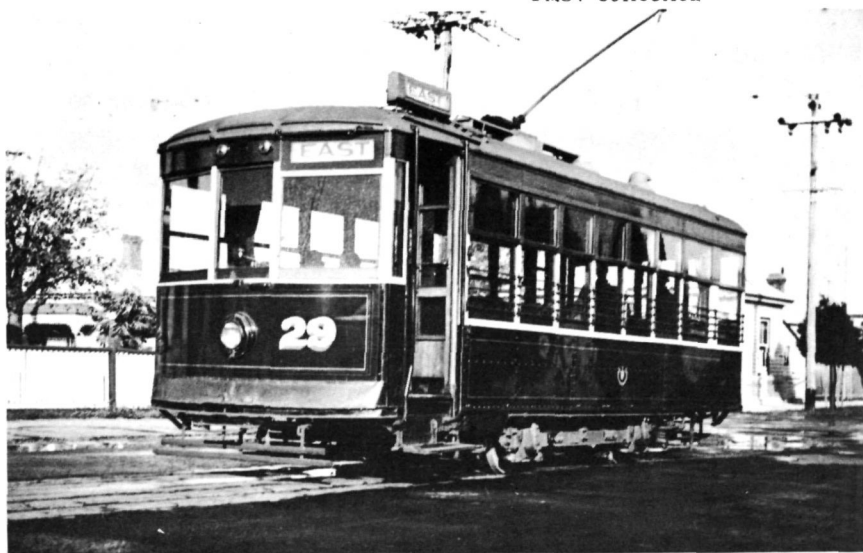
In Adelaide, the Municipal Tramways Trust possessed four Birneys, classed "G", and numbered 301 to 304. They operated on the isolated Port Adelaide system, to the north-west of the city. The four cars were assembled at the Port Adelaide depot, reportedly at a unit cost of only £820. (6) It is uncertain whether the





Melbourne's St. Louis-built Birney car No.218 during trials with bow collectors.

-TMSV collection



Birney No.29 (Ex Adelaide G-class 302) at Newtown terminus of the Geelong lines in the 1930's.

-late Wal Jack photo

Adelaide cars ever had two trolley poles, as did the Melbourne and Geelong cars; no photo of them as such is known to exist. They arrived about a year later than the Melbourne cars and it is quite possible that they differed in this respect. In December 1925, they entered service and were used principally on the Rose-water route until the Port Adelaide system was converted to trolley bus operation in July 1935. In 1936 they were sold to the State Electricity Commission of Victoria who numbered them 30, 29, 27 and 28 respectively on the Geelong roster.

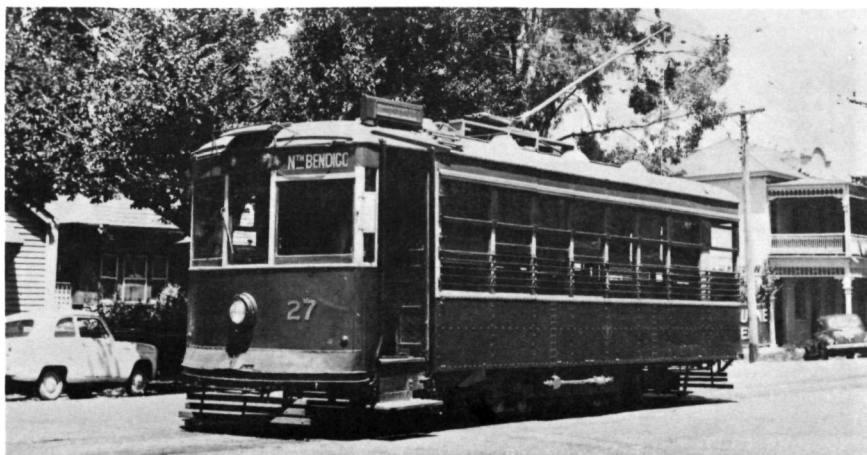
The Melbourne Electric Supply Co. Ltd. operated the tramways at Geelong in 1924, when two Brill Birney cars, numbered 14 and 15, were assembled at Geelong depot. Nos.14 and 15 differed from the other Australian Birneys in that they had longitudinal seats instead of the usual transverse, tip-over seating. These two cars were joined by the four from Adelaide in 1936.

In 1947 the ex-Adelaide cars were transferred to Bendigo, to be followed by 15 and 14 in 1948 and 1949 respectively. No. 14 was renumbered 11 in Bendigo. Since that time, No.27 met with a serious accident and has been scrapped. Nos.15 and 11 also suffered in accidents; No.15 spent its last years languishing at the rear of Bendigo depot with one end missing. No.11 suffered damage to one end in an accident, but is repairable and has been promised to the TMSV for restoration. No.28 has been presented to the AETM for use at their museum in Adelaide.

Birneys operated in Bendigo until the closure of the system on Sunday 16th April 1972. Two of the cars are presently in use on the Bendigo Tourist tramway.

## PROPOSALS

There was, in 1920, a proposal to obtain a fleet of 30 Bir-



Bendigo Birney No.27 at McCrea and Arnold Streets on 30th January 1956.

-Keith Kings

ney cars for Sydney, but this was rejected, chiefly on "political" grounds.

The Victorian Railways considered Birney cars for their Sandringham -- Black Rock Electric Street Railway in 1924. They received a quote from Noyes Bros., the local agents for St. Louis Car Co., of £3242 -- which was considered rather high (by comparison with bogie cars of VR manufacture). Because of this, and other operative factors, the proposal was shelved.

It seems most likely that all other electric tramway operators in Australia would have considered, at some time, the introduction of Birney cars, for their success, while transitory, was most spectacular.

### TECHNICAL DETAILS

Car No. (last)	217	218	11	15	27	28	29	30
Bodybuilder	Brill	St.Louis	Brill	Brill	Brill	Brill	Brill	Brill
Truck	79E1	St.L.7*	79E1	79E1	79E1	79E1	79E1	79E1
Seating	33	33	30	30	32	32	32	32
Motors	GE264	WH510	GE264	GE264	GE264	GE264	GE264	GE264
Tare tons..	8.2	8.5	7	7	7	7	7	7
Previous Nos.	-	-	14	-	303	304	302	301
Dates in Service								
Melbourne -	9/6/24	10/6/24	-	-	-	-	-	-
Port Adelaide -	-	-	-	-	26/12/25	26/12/25	16/12/25	16/12/25
Geelong -	-	-	27/8/24	29/9/24	17/1/36	24/1/36	6/2/36	30/1/36
Bendigo -	-	-	-/6/49	-/-/48	16/12/47	30/10/47	13/7/47	13/7/47
Stored	16/2/57	16/2/57	by 12/71	24/4/59	-/7/56	-	-	-
Disposed of	21/8/58**	10/7/57	-	-	31/7/58	-	-	-
Mileages								
Melbourne -	717469	826785	-	-	-	-	-	-
Port Adelaide -	-	-	-	-	200598	203648	195522	185785
Geelong -	-	-	416863	399578	202773	184600	188362	195787
Bendigo -	-	-	110711	66736	53134	107585	208300	172584
Totals	717469	826785	527574	466314	456505	558833	592184	554156
Last Operator	MMTB	MMTB	SEC	SEC	SEC	SEC	SEC	SEC

\* Rebuilt by MMTB and re-classified MMTB No.4

\*\* To TMSV (originally AETA)

The foregoing has been mainly based on an article which appeared in "RUNNING JOURNAL" for October 1967. I would like to express my gratitude to those who assisted in the production of that article, in particular Mr. K.S.Kings and Mr. R.H.Prentice.

### REFERENCES:

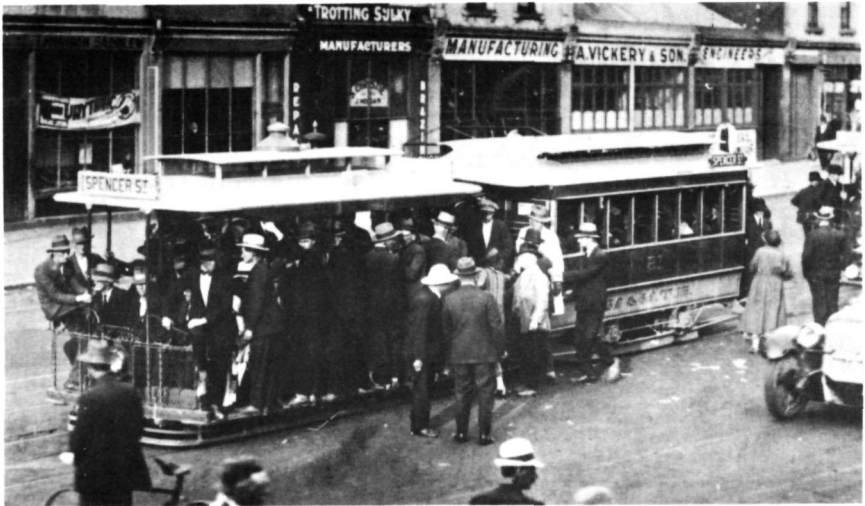
1. Electric Railway Journal, 'Report of Atlantic City Convention, 1919', p318
2. Tramway and Railway World, 19th April 1923
3. Electric Railway Journal, Vol 65
4. The Herald (Melbourne), 5th June 1924
5. The Argus (Melbourne), 2nd October 1924
6. Development of Street Transport in Adelaide, Official history of the MTT, 1907-1965.
7. Tram Tracks, February 1949.

### ALSO:-

The Birney Car, Dr.H.E.Cox

Trolley Car Treasury, pp171-4, F.Rowsome.

## THE MELBOURNE TRAMWAY SCENE – 1923



Cable tram grip car and trailer bound for Spencer Street, loading at Bridge Road, Richmond in 1923.

*by D. Menzies*

On 23rd December 1973, thanks to the courtesy of the Melbourne and Metropolitan Tramways Board, a tram tour was arranged to commemorate 50 years of operation of W2 class tram 219. One of the planned highlights of the tour was the line-up of tour trams 219 and 653 with the new prototype tram No.1041 at Preston Workshops. While 1973 has been an eventful year in Melbourne's tramway history — a year when the trams became a respected mode of transport once again — 50 years ago in 1923 things were far from dull. With the aid of Annual Reports from June, 1922 to June 1924 and newspaper cuttings of the time, we can look back at the problems of that era and see how they effect today's situation

The cable trams and their fate take up a fair proportion of of the record. They were under the death sentence following the Royal Commission Report of 1910 but what should replace them was another matter. There are good arguments printed at great length in the press, and not only was there the argument of tram versus bus, but even what form of current collection the trams should have. The M&MTB's Chairman, Mr.A.Cameron, went overseas in March 1923, and came back in favour of the overhead wire system of current collection.

The ARGUS of 12th January 1923, has an interesting picture showing some of the staff sitting behind a large table piled



high with the old style bell punches. Some 800 of the punches had been withdrawn and further 1100 were to follow. A few of these punches are still in private hands, and recently a "Kiwi" museum member with eagle eyes spotted and purchased one from a shop in the suburb of Burwood.

The Board had two main problems, both of which had the same result -- financial distress. The first was contained in its own Act, especially the section which provided for the payment of money to such worthy causes as the Fire Brigade, the Infectious Diseases Hospital and others. This cost the Board dearly over the years, and they did not get rid of this millstone until 1955. For the first four years to June 1923 the total payments were £332,255 -- a large sum of money in those days. In order to make these payments in some years the Board was forced to borrow money at interest -- a truly crazy situation!

The second problem was similar to that in the UK, although in Melbourne the "crunch" came earlier. This was the problem of private bus competition. It was not controlled until 1925, and gave both the tramways and railways (who were investing a lot of money in their undertakings) a hard time. Men fresh from the 1914-18 war, mostly with no financial skill, purchased a lorry or bus and set up in competition with the established operator along a route. The cable trams, which were slower, had a hard time competing. As an example, there were six "pirate" bus operators to St. Kilda Road. The competition at times became very intense, and resulted in buses racing each other. The press were anxious



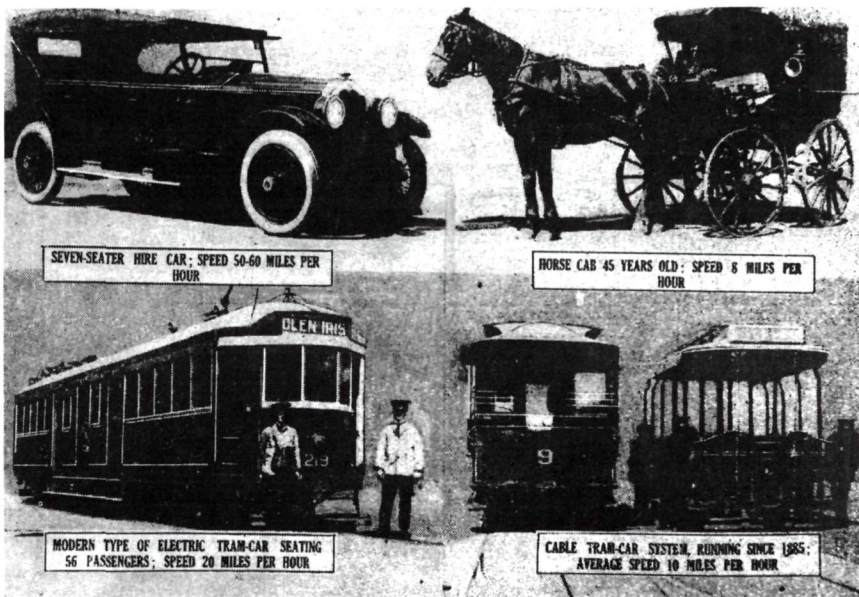
Solid tyres feature prominently on this AEC chassis bus of the 1920's.

—Keith Kings collection

to see the situation tidied up but it was a tough fight.

Late in 1922 the Board produced a plan showing proposed extensions to the system including the cable tram conversions. One of the Board's reports lists the different forms of traction and its reasons for preferring electric trams. The proposed extensions included tramways in Williamstown. Local councils were keen for extensions because the road costs were to be borne by the tramway authority for the area of the track and for 18 inches on each side! Further, for the extension of the Chapel Street service over the Church Street bridge, the Board had to pay 19% of the cost of the new structure - £16,224. In 1923-24, the sum of £635,000 was spent on new buildings and rolling stock, including the opening of Glenhuntly Depot, together with much new trackwork. In later years, the Board blamed its Act and the motor bus competition as the main reasons why many of its great plans were never carried out.

The year 1923 saw two accidents take place which were to influence future operating practices. The first was a collision between a train and a tram at the open level crossing in Whitehorse Road Deepdene - the Board of Enquiry blamed neglect of the existing regulations at such crossings. The second accident was on the Essendon route in Mount Alexander Road, when a heavily loaded electric tram and trailer got out of control and ran away down the hill. Trailer cars were used by the private company



'Ancient and Modern' read the caption 50 years ago. The hire car and the then new W-class tram were contrasted with the horse cab and the cable tram.

which had owned the line prior to the Board's takeover the previous year. Trailer operation was subsequently banned and the trailer cars not used again in passenger service.

Horses were still used by the Board then, both on the Royal Park tramway and for other duties, including pulling cable trams in and out of depots. The "Feed Works" were at North Fitzroy, and new stalls were constructed for the horses. A local TV station, when recently producing a film on the year 1923, called it the year "that Melbourne went mad". In November 1923 there was a police strike which resulted in very bad street riots. During these, on 5th November, the Royal Park horse tram depot was set alight and the four trams destroyed. This line, 6/10ths mile long, opened on 10th March 1890 and is stated in the Reports never to have made a profit, but it was an interesting and useful attraction.

Some statistics, as at 30th June 1924:-

529 cable grip cars, 539 four wheel cable trailers, 58 bogie cable trailers  
244 electric trams (167 single truck cars and 77 bogie cars including 28 of the new W type cars)  
45.576 miles cable tramway, 59.4 miles of electric lines  
147,800,506 passengers carried on the cable trams  
17,091,564 passengers carried on the electric cars.

The interesting tour last December brought home to many how the tramway system had survived and progressed, despite the many threats against it over the years. As No.219 has lasted 50 years and is still going strong, maybe it is possible that No. 633 will see her 50th birthday in 1981! For the sake of progress and modernisation, we should perhaps expect that 633 will have been replaced by a more modern tram, but maybe it will be kept aside - in transport, anything can happen!

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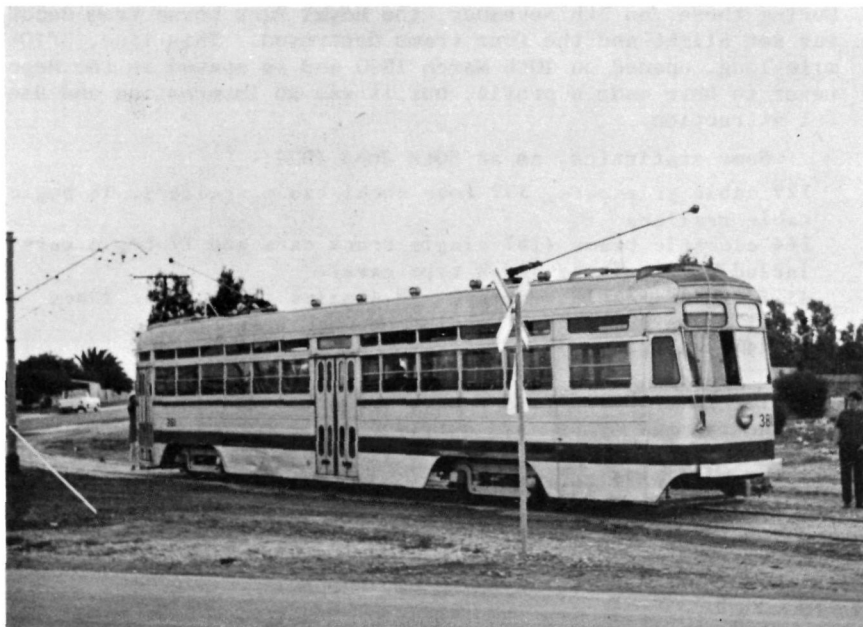
#### SPER - NOTICE OF MEETINGS

The Annual General Meeting of the South Pacific Electric Railway Co-operative Society Limited will be held at Loftus on SATURDAY 29th June 1974. Members will be further notified. The next General Meeting of the Society will be held at the Railway Institute, Devonshire Street, Sydney on Friday, 23rd August 1974.

\* \* \*  
TRAM RIDES on steam hauled tramcars at  
STEAM TRAM PRESERVATION SOCIETY  
Parramatta Park, behind Old Government House  
1.30 - 4.15 pm THIRD Sunday of each month  
\* \* \*

**\* MUSEUM Notes & News \*****from ST. KILDA**

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM



During the first month of operation, almost 5000 passengers were carried on the St. Kilda tramway. Three trams are normally used to provide the base service. One car stands at the Museum loading while the other two cars are operating on the line in opposite directions, passing at the loop. On busy days, a 10 minute service has been operated, entailing immediate turn-round and departure from the St. Kilda terminus. On occasions, divisions have been run similar to those used on the opening day. On less busy days, a 15 minute service has been run with a 5 minute layover at St. Kilda. Some evidence of traffic patterns has already emerged, the car leaving St. Kilda at 4.15pm often having a peak load, as it had been filled with riders who have spent the afternoon promenading at St. Kilda.

Special tourist hirings have already been operated, early visitors including the Field Naturalists Society of South Australia and the MTT Old Comrades Association, some of whose members arrived in MTT Leyland Worldmaster coach No.270 when it



paid its second visit to St. Kilda in six weeks. It has become evident that there is some potential for special operations, and major hirings are already booked for July and September.

H1 car No.381 was driven under its own power for the first time on Saturday 30th March, one week after the opening ceremony, and has proved to have extremely good operating characteristics on the line. Following successful clearance tests, the car is now being cleaned, chromework repolished, new destination blinds fitted, lifeguards reinstalled and minor servicing carried out. It is expected to be in traffic by mid-year.

Following completion of switching to Road No.1, D car No. 192 has been transferred to that road for continuation of body-work restoration, while car 381 is being serviced in the workshops. The transfer represented the first time that car 192 had been moved since it came to St. Kilda in 1958.

As the Municipal Tramways Trust has returned nearly fifty 3 door buses to regular traffic, it has been decided that the museum's three door bus, AEC Regal Mark IV No.623 will not yet be placed on display at St. Kilda. Arrangements have been made to have it transferred from open storage at Angle Park to covered storage at the Maylands horsecar depot.



ABOVE: The museum's tractor was used to transfer D class car No.192 from Road 3 to Road 1 in April 1974, its first movement in 16 years.

OPPOSITE PAGE: H1 class car No.381 about to leave the side of road reservation in Shell Street, St. Kilda to enter the Mangrove Street level crossing on one of its first test runs.

—R.Magnussen

**from WOLLONGONG**

## ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY

The Illawarra region of NSW received more rain during the first four months of 1974 than the average for the entire year, this has slowed the initial development of the Albion Park site.

During Saturday April 27th and May 4th, a rushed project was completed, the demolition and transportation of 1200 ft of park rail fence from Bulli primary school. As the school is located adjacent to the busy Princes Highway and the job could not be commenced until the replacing fence was ready to be erected and fortunately the ILRMS progress enabled the demolition to be just in front of the erection team.

At Albion Park, the entrance gate has been completed, and over 400 ft of a total of 1300 ft of park rail fence, needed to enclose the display area, erected. On Saturday May 18th a donated load of nine tonnes of blue metal was graded by hand over the car entry area while the first 40 feet of permanent track was set in position and ballasted to receive the expected arrival of some rolling stock in the near future.

Readers may recall that during the first year of Society activity, some 2330 man hours were worked on museum parties; during the second year ending April last the annual total was 2235 hours. This figure was a little less than the first year being due to less full day activities, but many members spent considerable hours on restoring rolling stock at home which was not included in the above total.

Repainting of the Gemco electric 2ft gauge loco is nearing completion, while several members have purchased privately, petrol diesel and steam locos for eventual use at Albion Park. These include four diesel locos; one Jenbach and one Simplex 2ft gauge machines, approx. 3 tonnes each; two Hunslet 3ft 6in gauge locos; one petrol 2ft gauge prime mover, fitted with a Peugeot engine and formerly used in agricultural service; and the mortal remains of 2ft gauge Krauss 0-4-0T steam loco No.6927 of 1914, once used on the Corrimall colliery railway.

Over 20 members and friends participated in a most enjoyable social outing on Sunday April 28th. SPER member Ben Parle exhibited his 'O' gauge model tramway and part of his Hornby railway collection followed by an excellent buffet lunch prepared by his wife, Megan. The party then moved on to St. Ives where the railway activities of Messrs Phil and Bruce Belbin were inspected. Phil Belbin had one of three 'one inch to the foot' miniature steam locos in steam on his picturesque garden railway, and proudly displayed his comprehensive international builders plate collection. The 2ft gauge Perry 0-4-2T steam loco (ex-Mourilyan Mill No.7, B/No.2714/51/1 of 1951) being restored by Bruce Belbin was admired by the ILRMS party, all agreeing that this Society would be more than satisfied if the ILRMS 'Perry' could be restored later to this high standard. Both the Parle and Belbin families are thanked for being hosts to this Society on that occasion.

TROLLEY-WIRE  
JUNE 1974

0-4-2T Perry loco undergoing restoration at St. Ives. 28th April 1974.

Some ILRMS members admiring the entrance gate at the Albion Park site. The 12in x 12in gate post extends 5 ft below the groundline! 6th April 1974.

—Ken McCarthy



ILRMS social outings have included visits to the Newcastle mining areas, the Balls Head coal loader, the sites of the 2ft gauge Newbold quarry railways at Ulladulla and Mudgee, the Megalong Valley tourist railway site. Readers interested in accompanying the Society on these activities should contact the Secretary at PO Box 1036, Wollongong 2500 for details of future events.

## from BALLARAT



### BALLARAT TRAMWAY PRESERVATION SOCIETY

**TRACKWORK** Trackwork has been completed except for the curve and points to connect the access line to Wendouree Parade. These works are well in hand and should be undertaken within the next two months.

The Ballarat City Council has generously allowed the Society to store rail and equipment at the Council depot, and this has subsequently been moved to store. Previously the rail had been stored on parkland adjacent to the depot.

**ELECTRICAL** Diodes, Klipsels and Minifin have been purchased for our substation (we await the delivery of fuses). While this equipment is being assembled, the cable from the SEC pole-mounted sub to the depot will be laid, allowing connection of supply within the next few months. All overhead wiring has been erected except for the connection from the access line to Wendouree Parade.

**AROUND THE DEPOT** Bob Prentice and Jack Chadwick have painted the exterior of the roof of tram No.27, and they are now preparing the body for painting. The roof advertising boards have been removed for this purpose, and these items will be replaced when the works are completed.

In order to raise the floor level inside the depot to that of ground level outside, members have, over the past 4 months, been laying crushed tile and quarry scalplings; this action has effected considerable improvement to the interior of the 'car barn'

The museum display in tram No.26 is open to the public every Saturday, Sunday, and Monday when the latter is a holiday. Since the introduction of tramway tickets for admission on 22/8/73, a total of 3113 persons have visited the display in the seven months to 22/3/74.

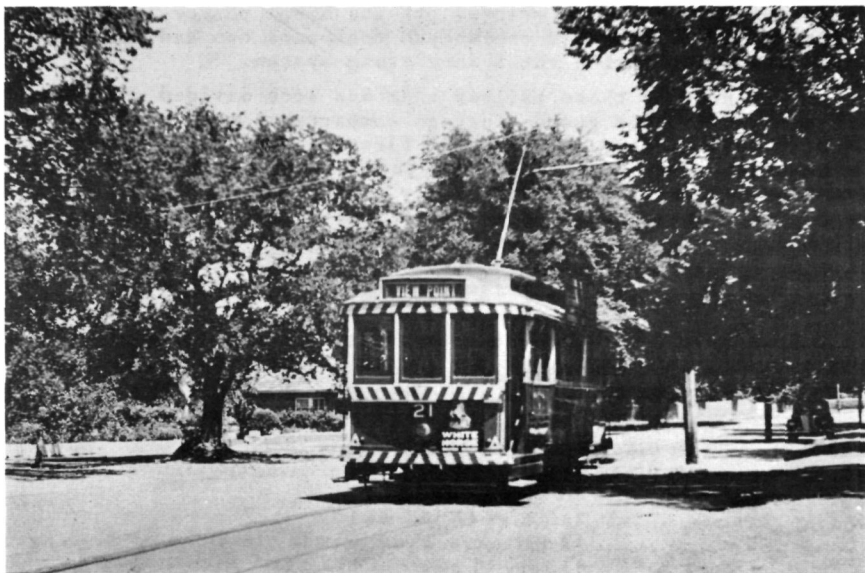
**ADELAIDE MUSEUM OPENING** Twelve members attended the opening of the AETM Museum St. Kilda Tramway on Saturday 23rd March 1974. Vice President, Bill Jessup and Secretary, Clyde Croft represented the Society during the Official Opening Ceremony, and they were invited guests aboard Tram No.1. Society members also enjoyed group travel on regular South Australian Railways services to Northfield and Semaphore on Saturday morning, along with a special tram tour during Sunday afternoon utilising tram No.375 & 376. An interesting outing by a hired 'drive your own' Mini Bus was enjoyed by all present during the





After another successful day, tram No.26 (the car in which the Society's museum items are displayed) is pushed into the depot. Soon, this task will be a thing of the past.....

-C.Duncan



Adelaide A class car 10, later Ballarat No.21, running on the tree-lined Viewpoint line in Ballarat in 1968. No.21 is now on service on the AETM St. Kilda tramway.

-Jim Seletto

morning, following the new Christies Downs railway and the closed Willunga railway. The Society thanks the AETM for asking us to participate, and we all extend every best wish for the future successful operation of their Museum.

## from PARRAMATTA

### STEAM TRAM PRESERVATION SOCIETY

On March 9th 1972, the Steam Tram Preservation Society at Parramatta Park received a most interesting vehicle, the body of NSWGR 'KA' class 84 (later 443) which had been used as an ambulance room at Cootamundra loco depot since 1939. Known as 'tramcars' on the railway's roster, this class of coach was employed on the Campbelltown - Camden and Yass Junction to Yass Town lines, and in reality were lightweight railway carriages.

The Camden to Campbelltown railway was opened in March 1882 as a rural roadside tramway worked by Sydney tramway motors 6 and 8 and end loading bogie saloon tramcars of the 'B1' class numbers 13, 14 and 15.

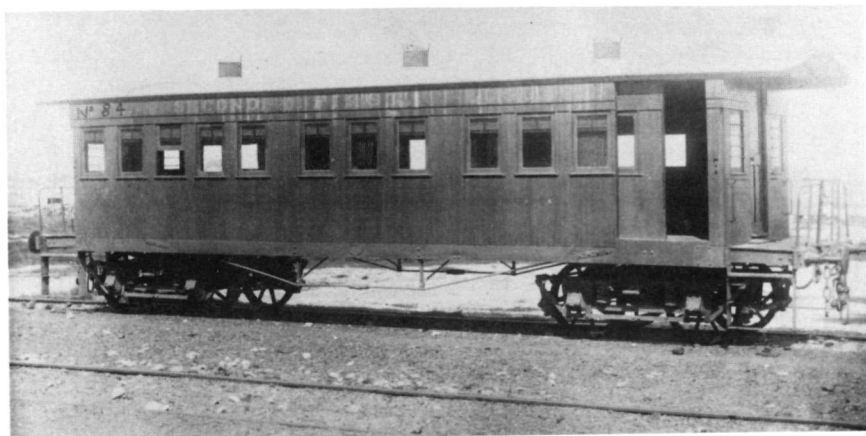
In July 1884 the two steam tram motors returned to Sydney, being replaced at Camden by two 0-6-0 conventional lightweight saddle tank locos, Nos. 292 and 293. The Sydney tramcar trailers remained until 1885 when the two new Hudson composite 'tram car' carriages entered service in May and September carrying numbers 84 and 85 in the 'composite car' list of the NSWGR. The three original trailers were written off the NSWGR roster in 1887 by which time the enclosed crossbench footboard car had emerged as the standard tram for the Sydney steam system.

The body of these railway tramcars were divided into three sections:- a large guards-luggage compartment was located at one end, a central section seated 12 first class passengers on six transverse seats located 2x2 on each side of a centre aisle, while 20 passengers were similarly accommodated in the second class end section on 10 transverse seats. The seats appeared to be non-reversing as some were fixed back to back. The railings on the end platform allowed access to the next car on the guard's end, but the one at the passenger end extended right across the platform.

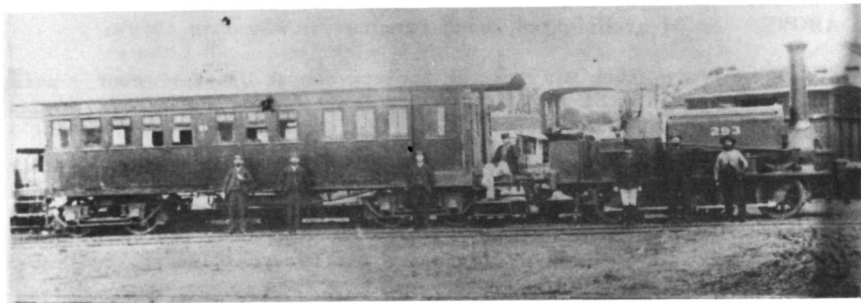
The principal dimensions of these cars were:-

Length.....	39ft 0ins (11 880 mm) over buffers.
	31ft 0ins (0 450 mm) over body.
Width.....	8ft 10ins (2 690 mm)
Height.....	11ft 0ins (3 352 mm) rail to single roof.
	13ft 0ins (3 962 mm) rail to top of later double roof.
Bogie wheel base....	4ft 9ins (1 448 mm)
Bogie centres.....	23ft 6ins (7 162 mm)
Capacity.....	12 First class, 20 Second class seated passengers
Tare.....	11 ton, 13 cwt (11 872 kg)

When delivered, these two cars were fitted with three internal oil lamps, a single arch roof and no form of continuous

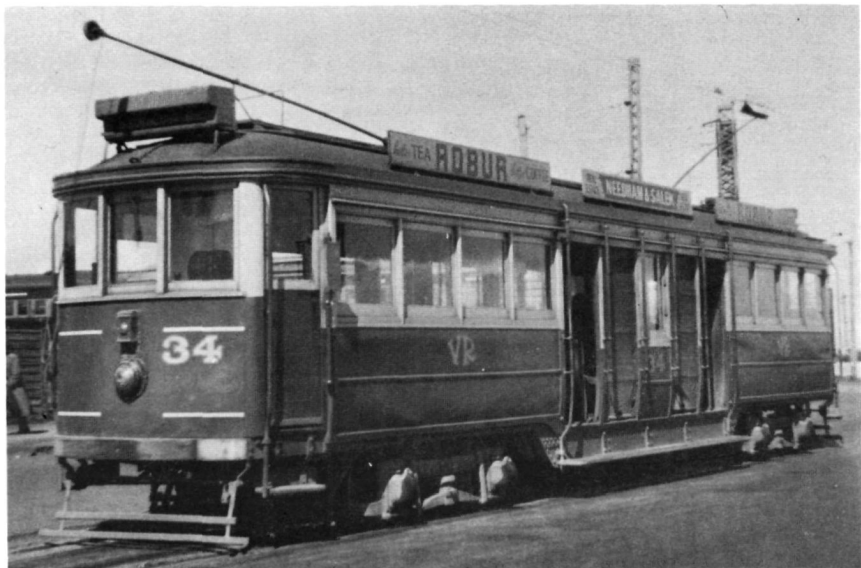


TOP PHOTO: Car 84 (composite) as delivered with single roof, oil lighting roof pots and no continuous brakes. MIDDLE PHOTO: Car 85 (composite) and Manning Wardle loco 293 (of P127 class) at Campbelltown c.1890. By this time continuous brakes had been fitted to these cars.  
from STPS Archives, C.B.Thomas collection



Body of car 84 arriving at Parramatta Park from Cootamundra on 9th March 1972.

—from STPS Archives, R.F.Moag collection



ABOVE: No.34 at Brighton Beach terminus in the late 1950's.

—R.Lilburn

BELOW: Sunday 26th May saw the Society run an 'Ansair' tour – using MMTB bus No.530 (AEC Mk III with the Board's only bus body by 'Ansair') and W7 tram No.1025 (one of 13 of these cars with frames by 'Ansair').

The Bus Branch produced 530 in resplendent form while 1025 had recently received a major overhaul at Preston Workshops. An interesting and pleasant day was spent touring a wide segment of the eastern suburbs, and our thanks go to the MMTB's staff for providing two vehicles in immaculate condition. The photo shows the two vehicles parked in South Melbourne Depot during the lunch break.

—Len Millar



brake. Before 1892 air brakes had been fitted while by 1900 each car had received a double roof aimed at reducing the internal temperature in summer months. The type of roof vents presently carried by car 84 suggests that during the period just prior to being withdrawn from passenger operation, the double roof was removed and gas lighting fitted.

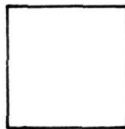
During 1892, when state wide carriage numbering system was introduced, car 84 became 443 and 85 received 597 with the class code of 'KA'. Two similar carriages built in 1891 for the Yass tramways carried numbers 140 (later 778) and 141 (777 in the post 1892 period).

Between 1917 and 1919 the KA cars were superseded by CCA cars, converted from 'American' end loading suburban coaches. KA 85 (597) was condemned in January 1918 and sold to the Caledonian Coal Company for further use on their private railways in the Newcastle district, while 84 (443) was condemned in May 1919 but retained as a service vehicle until November 1939. As mentioned, in the intervening 33 years, before being transferred to Parramatta Park, the body of this interesting vehicle was used at Cootamundra as a static Ambulance Room.

Fortunately car 84 was protected from the elements at Cootamundra so the body is in a fair state of repair. The 4ft 9in wheel base bogies are no longer obtainable but the Steam Tram Preservation Society has been fortunate in being able to obtain trucks of a similar design but with a 5ft 6in wheel base from the NSWGR (PTC of NSW) to enable the relic to once again become mobile.

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This report has been based on data supplied by D.Estell, F.Moag and W.Bayley.

**from BYLANDS**



TRAMWAY MUSEUM SOCIETY OF VICTORIA

DEPOT During April, a crane was hired from a contractor at Kilmore to enable two of the spare ex-SEC poles to be erected at the rear of the shed. They will carry the rear wall and one pair of doors, the latter forming an exit from the the east road. Another pole was placed on the centre line at the north end of the shed and will facilitate hanging the two pairs of double doors needed at that point. Full height doors, acquired from the now demolished SEC Ballarat tram depot, will be used at the front and rear of our depot.

Work commenced early in May to cut and erect the short (3ft) sheets of corrugated iron along the east wall of the shed, and these will fill the gap left by using the 15ft second hand sheets. About two-thirds of the plain and ventilated ridging has been placed on the roof. About 20 metres at the north end of No.2 road has been filled to sleeper height (from the wall and across the track) with 'scalpings' to provide temporary storage for the workers' mess bus (ex-MMTB Permanent Way unit) and the Leyland Bus No.133 (one of the MMTB's original Bourke Street buses,

privately preserved). Our tower wagon and the tractor also repose under cover at the south end of this road, in the workshop area.

TRACTOR On Sunday, 21st April, the Society received the long awaited tractor. It has already been in use every Sunday for haulage purposes and is relieving the tower wagon and members' cars from such duties! The tractor was generously made available to us by Messrs M.G.Hill & Son, Graziers, of Colbinabbin (near Rushworth), who kindly restored it to full working order before delivering it to Bylands. It is a 1937 McCormack Deering farm tractor with a 1946 Cummins model AA diesel engine, fitted in 1960 (replacing the original petrol/kerosene unit). It weighs three tons and has three forward and one reverse gears. Within minutes of being driven off the back of its delivery truck, it was called upon to haul the motor truck out of some soft ground. Subsequently, it has been used to haul rails from various locations to a central stack, and is presently engaged in moving the ex-Geelong grooved tramway rail from the former railway platform northwards to a new stack.

TRAM No.34 After 15 years in open storage, former Victorian Railways bogie tramcar No.34 arrived at Bylands on April 18th - and was immediately placed under cover. This car last saw service on the 5ft 3in gauge St. Kilda to Brighton tramway on Friday February 27th 1959. It was sold to the Australian Electric Transport Association on March 27th, 1959 and was moved to a private property beside the Plenty River at Yarrambat, some miles north of Greensborough. It passed to the TMSV on 31st August 1963, when the AETA sponsored our Society to specialise in tramway preservation.

The movement from Yarrambat to Bylands was both difficult and expensive, and an appeal has been opened to offset the cost. Firstly, a heavy duty swivelling crane was required to load the car and its trucks onto a lowloader. Although No.34 had rested within 50 yards of the property's homestead, it was on quite a slope, as the ground fell away steeply to the river below. The route to the road traversed two kilometres of rugged terrain, initially across paddocks and then along a rough and at times steep track. Eventually the bitumen was reached and 34 was as good as at Bylands.

We had laid some 40 metres of dual gauge track at the north end of No.1 road to take 34 on its own trucks, but the MMTB generously made available to us two surplus No.1A truck frames with wheel and axle sets a few days before the movement took place. These trucks enabled No.34 to be placed on the standard gauge, and it is thus 'fully mobile' on our trackage. Its own trucks have been placed on a short length of 5ft 3in gauge track at the rear of what will become No.3 road, and they are protected from the weather by plastic sheeting.

No.34 represents the major class of tramcar (18 cars plus two converted to one-man type) which operated services on both the St.Kilda and Sandringham lines. Our car is one of the second batch of five cars built (Nos. 33-37), and arrived at Elwood depot from the VR's Newport Workshops on 14th February 1918. The exterior of No.34 is presently painted with a protective coating of white, but it originally was tuscan red with cream lining and rocker panels. The words 'Victorian' and 'Railways' were out-



lined in large lettering on the rocker panels. The varnished interior is still in excellent condition.

**RESTORATION** Work continues slowly on No.180 on Wednesday nights at Malvern depot. The sanding and filling of the body panels is taking more time than originally expected. A number of heavy items stored in 180 and 164 were recently transported to Bylands on the Ford truck, thus clearing some obstacles from under the restoration team's feet. The Radiax truck frames obtained from MMTB No.182 have been delivered to Preston Workshops for shortening to suit the ten foot wheelbase of Geelong No.22. At Bylands, No.22 has been placed on blocks following the removal of 218's truck.

**AROUND THE SITE** The presence of the crane also enabled a few other jobs to be carried out. Two 33in wheel, axle and gear sets, 218's truck, the cable trailer chassis and cable bogie were placed on the first two panels of No.3 road at the northern end of the depot area. As well as moving rail, the tractor placed the rest of the spare ex-SEC poles in the car park area for use as barriers.

Our street furniture collection has been further complimented by obtaining a civil ambulance street alarm and pedestal. Another recent acquisition is a complete uniform of a former Ballarat tramways Motorman/Conductor.

## **PRESERVED TRAMCARS IN AUSTRALASIA**

In previous issues of *TROLLEY WIRE*, between June 1966 and April 1968, we presented articles under the general heading of *Preserved Tramcars*. The series lapsed mainly due to the substantial increase in preserved vehicles but also in part due to space limitations in this magazine. Efforts to revive the series have so far been unsuccessful, so in the meantime we present, in much reduced, tabulated form, the results of a survey carried out by *TROLLEY WIRE* staff in 1973. These tables should be used by readers as a basis for their own further investigations.

### **Victoria**

#### **TRAMWAY MUSEUM SOCIETY OF VICTORIA**

*Victoria's Tramway Museum, Union Lane, Bylands, open for inspection - Sundays.*

TRAMS:	1 - MMTB	4 - BTCo.	8 - HTT
	17 - SEC(Ball)	29 - VR	22 - SEC(Geel)
	23 - SEC(Ball)	34 - VR	35 - MMTB
	36 - SEC(Ball)	164 - MMTB	180 - MMTB
	217 - MMTB	467 - MMTB	

#### **BALLARAT TRAMWAY PRESERVATION SOCIETY**

*Set up to preserve Ballarat trams in operation in Ballarat, in conjunction with the Ballarat City Council. All cars last used on this system.*

TRAMS: 14, 26, 27, 28, 38, 40

**PRESERVATION GROUPS WITH SINGLE BALLARAT CARS**

(not otherwise covered elsewhere in this list)

<i>Daylesford &amp; District Historical Society</i>	11
<i>NSW Steam Engine Preservation Society</i>	12
<i>Lake Goldsmith Steam Engine Pres. Society</i>	13
<i>Borough Council of Sebastopol</i>	18
<i>St. Arnold Rotary Club</i>	30
<i>Maryborough (Vic) Chamber of Commerce</i>	32
<i>Western District Transport Museum, Hamilton</i>	33
<i>Ballarat College</i>	35*
<i>Lions Club of Lismore, Victoria</i>	39
<i>Wimmera River Improvement League Horsham</i>	41
<i>Zion Congregational Church, Sebastopol</i>	42*
<i>Apex Club of Barwon, Geelong</i>	43

(\*bodies only)

**EAGLEHAWK BOROUGH COUNCIL***This council has one Bendigo tram on display at its historic museum at the Old Log Stockade***TRAM:** 26**BENDIGO TRUST TOURIST TRAMWAY***Set up by Bendigo businessmen to run Bendigo trams over part of the street track abandoned by the SEC.*

**TRAMS:** 2 3 4 5 6 7 8(1st) 12 14 15 16 17(1st)  
 17(2nd) 18 19 20 21 23 24 25 28 30

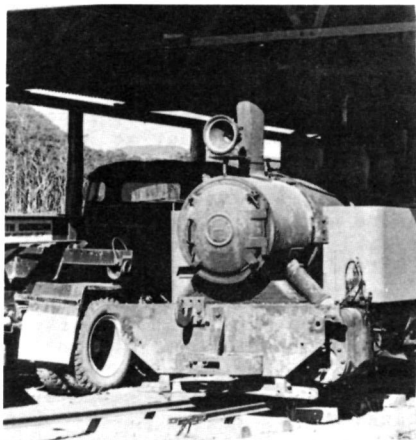
**AUSTRALIAN RAILWAYS HISTORICAL SOCIETY (VIC) .***Static Museum of railway rolling stock in Victoria.***ELECTRIC TRAIN:** 8M - VR**NATIONAL MUSEUM***A conventional museum with cable tram, ship and railway historical models on display. Believed to have Melbourne cable tram and trailer for possible future display.***TRAMS:** Cable grip car 1, cable trailer 1 - MMTB

--to be continued.

**OOPS! ...I've Done It Again!**

Credits were inadvertently omitted from several photos in the last issue of *TROLLEY WIRE*. Those on pages 9, 10 (top) and 11 were from the collection of Reg Francis, that on page 30 was from the W. Bayley collection, while the photo and article on page 28 were kindly supplied by Bob Prentice.

## HERE and THERE



—Ken McCarthy

### MEGALONG VALLEY

NSW 2ft gauge steam

During March 1972, two Perry steam locos arrived at Megalong Valley in the Blue Mountains of NSW after a long road journey from North Eton Mill in Queensland. These will provide motive power on a proposed tourist railway to be built by Keith Duncan, the tearoom and sawmill proprietor, as a hobby-commercial venture.

The locos are:-

1. Perry 0-6-0T No.2382 of 1941 ex North Eton Mill No.6
2. Perry 0-6-2T No.6634/52/1 of 1952 ex North Eton Mill No.7

A visit to the railway site in July 1973 revealed that the earthworks of the circular 1 mile route were nearing completion while the two locos, housed in a 45ft x 24 ft shed opposite the tearooms, were in working condition. Twelve 4-wheel cane truck underframes were also on site to be converted into passenger cars.

The two locos were last in active service in 1965 but were retained as the mill in good order during the following seven years. North Eton No.7 was the last in the 2ft gauge group of five 0-4-2T and twelve 0-6-2T machines built by the Perry Engineering Co. of Adelaide between 1934 and 1952.

Latest reports suggest that some difficulty is being experienced in obtaining the necessary Blue Mountains Council permission to establish this tourist venture but it is hoped that the aspects preventing progress will be overcome in the near future. This is a private venture, so visitors should contact Mr. Keith Duncan at the Megalong Valley tea rooms before inspection of the undertaking is sought. Phone him on Megalong Valley 27 before leaving Blackheath.

BELMONT COMMON RAILWAY

Belmont Common, Geelong, Vic. 3ft 6ins gauge steam

This is the only operating 'main line' railway museum in Australia. and is the work of the Geelong Steam Preservation Society (see footnote). In 1966 the Fyansford cement works, located north west from Geelong, closed its 3ft 6ins gauge industrial railway and distributed its steam locos to preservation bodies. The Geelong Division of the Australian Railway Historical Society received two small locos in 1968 for display at Belmont Common in South Geelong.

Not satisfied with a static exhibit, a short length of track soon extended beyond the display site and limited operation commenced in 1969, when the preservation society was formed to take over the existing items and extend the museum activities.

Since that date the short length of track has grown to  $\frac{3}{4}$  mile, the motive power roster now stands at four locos on the site, while other items of rolling stock have joined the collection for use behind the steam engines. Future plans envisage a circular route of several miles over the Belmont Common with an eventual extension along the banks of the Barwon River towards Queen Elizabeth Park.

Locos on site are:-

- |                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| 1. Vulcan 0-6-0T No.2541 of 1916         | ex Fyansford No.4                                       |
| 2. Hudswell Clarke 0-4-2T No.646 of 1903 |                                                         |
| 3. Perry 0-4-2T No.271 of 1927           | ex Fyansford No.6<br>ex Pioneer Mill, Qld<br>'Klondyke' |
| 4. Walkers 4-8-0 No.276 of 1917          | ex SAR T-251                                            |

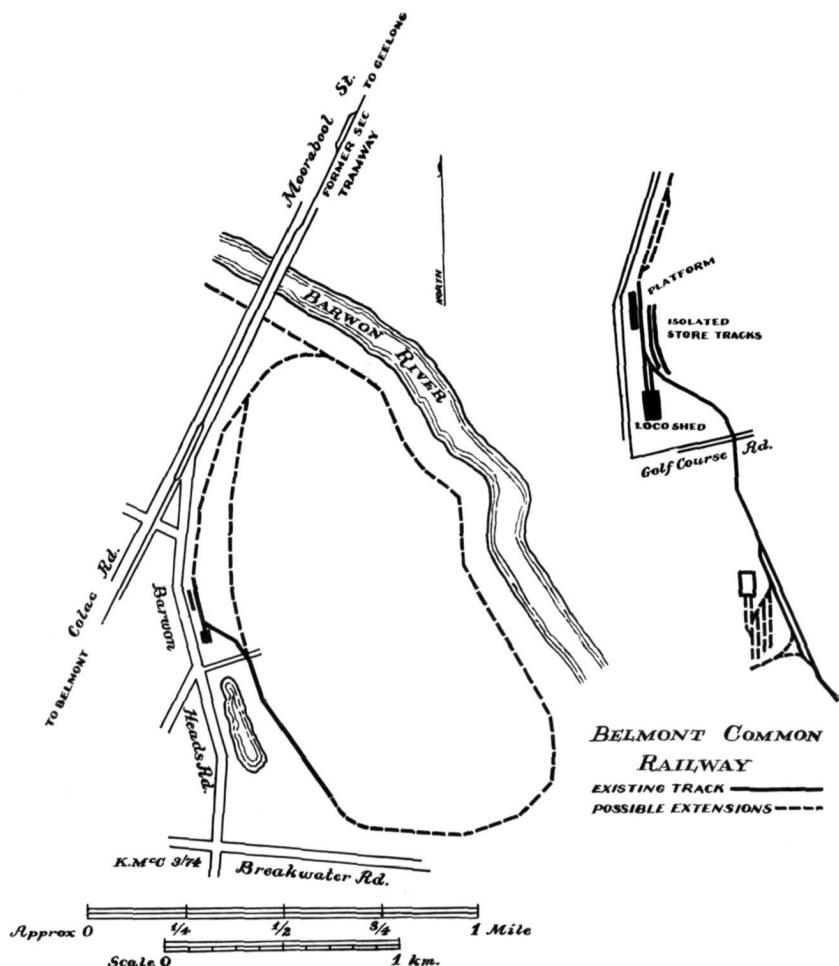
Rolling stock on site:-

1. End loading bogie passenger car 86 ex SAR vision testing car built 1888.
2. End loading bogie passenger car 450 ex SAR
3. Composite bogie guards van 5588 ex SAR, built 1916.
4. 6-wheel radial coach B+22 ex TML Rly Co. & TGR, built 1884.
5. Bogie well wagon fitted with seats, ex Fyansford
6. Bogie workmans carriage, ex Fyansford
7. AEC/Gardner 100hp rail motor RM 76, ex QGR, built 1934.
8. Rail motor trailer TL127, ex QGR.

In addition to these items the Society has a selection of side tip wagons (some Western Wheel and Scraper Co.), an 1898 'C' type goods truck ex Emu Bay C14, two former SAR ganger trolleys; while the TGR 4-6-2 loco M6 and Tasmanian carriages ABL9 and BBL6 are being held in Tasmania for the time being. Other items for which purchase and delivery costs are being raised by the Belmont Common group include a QGR PB15 4-6-0 loco (No.454) and a WAGR DD-class 4-6-4T unit.

A welcome awaits all readers at South Geelong where rides are provided for the public commencing at 1pm every Sunday and public holiday afternoon with some summer operations on Saturday.

Footnote: The statement, re main line museum, distinguishes between the Belmont Common Railway upon which is operated mainline, although 'narrow gauge' rolling stock, and the narrow gauge branch line as run by the Puffing Billy Preservation Society in Victoria. (Editors -TW.)



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\*65¢ - Recommended maximum selling price in Australia.

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Vulcan 0-6-0 loco No.4 (2541 of 1916) at Belmont Common station, Geelong, March 1974.

-R.Frier



The end of the line.... Sydney O class trams lined up at Randwick Workshops awaiting scrapping.

-Norm Chinn collection

THE OPINIONS EXPRESSED IN THIS MAGAZINE ARE THOSE OF THE AUTHORS  
AND NOT NECESSARILY THOSE OF THE PARTICIPATING SOCIETIES