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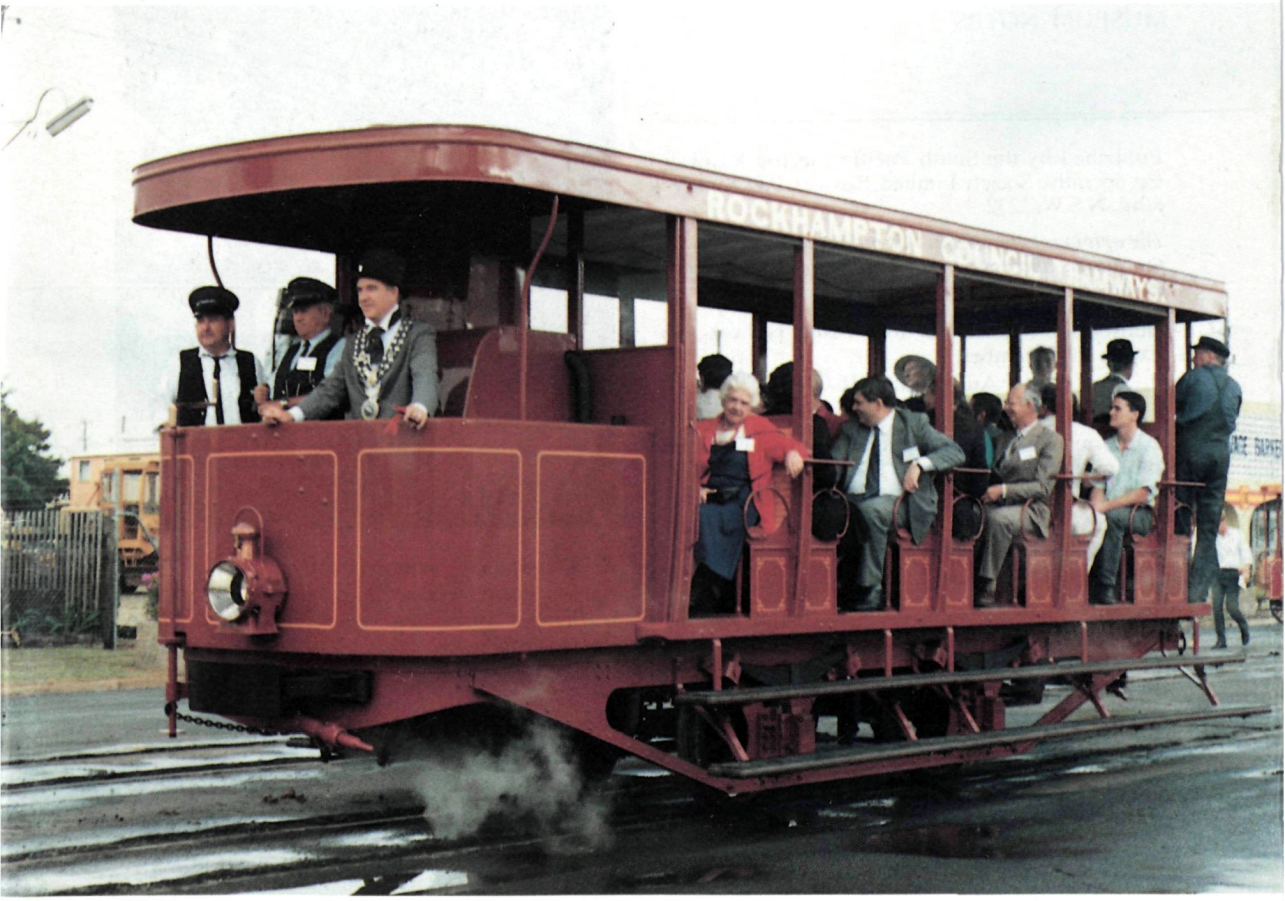

ROCKHAMPTON'S PURREY STEAM TRAM

TROLLEY WIRE

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BOX 103. P.O. SUTHERLAND 2232

EDITOR ..... Bob Merchant
PRODUCTION ..... Bob Cowing
SUBSCRIPTIONS ..... Norm Chinn
DISTRIBUTION ..... Peter Hallen
BULK SALES ..... Laurie Gordon

Rockhampton's restored Purrey steam tram movers slowly through the crowd lining the track in Denison Street on the morning of 5 June 1988. The tram is heading towards Stanley Street where official photos will be taken. BOB MERCHANT

FRONT COVER:

Rockhampton City Council's Purrey steam tram makes its first passenger carrying run down Denison Street on 5 June 1988. The Mayor of Rockhampton, Alderman Jim Webber, is riding on the front platform of the tram. BOB MERCHANT

BACK PAGE:

Top: Sydney R1 class 1979 stands in Tramway Avenue at the Sydney Tramway Museum, Loftus on 1 May 1988. BOB MERCHANT

Bottom: Restored Davenport locomotive "Kiama" and former Melbourne cable tram trailer 430 pose for Heritage Week publicity photos at the Albion Park Museum on 2 April 1988. KEN McCARTHY

TRIUMPH IN THE NORTH

THE RECOMMISSIONING OF THE ROCKHAMPTON PURREY STEAM CAR

by K.A. McCarthy

On Sunday, 5 June 1988 a steam tram returned to the streets of Rockhampton. Just after 9am the restored Purrey steam tram moved under a triumphal arch, following a ribbon cutting ceremony, in Denison Street at the Derby Street intersection. This repeated the ceremony held exactly 79 years before when the Rockhampton Council Tramways were opened under a similar arch in William Street near Bolsover Street.

Between 1909 and 1939 self-contained steam tramcars built by the firm of Valentin Purrey of Bordeaux, France, operated on the town tramways of Rockhampton, Queensland. The routes, which consisted of a circular line around the central city area with branches to Dawson Road, Showgrounds-Wandal, and Gardens, reached a maximum extent of 10.5 km in 1922. With the final rolling stock deliveries at that period the tram fleet reached nine self-contained steam trams and six trailers.

The Queensland Railways purchased two Purrey steam cars and matching trailers in 1924 and these worked the local Rockhampton suburban rail trips until the mid 1930s.

Articles published in the Australian Railway Historical Society *Bulletin* and this magazine *Trolley Wire* during the early 1970s stimulated interest in Rockhampton's unique transport heritage. The "18 to 35 Year Old" group of the Rockhampton Branch of the National Trust launched a search for tramcar

The Purrey stands in the sunshine in Stanley Street with the restored 1885 colonial railway office building forming a backdrop. BOB MERCHANT

parts, working through the City Council's disposal lists for 1939-40. The nature and amount of retrieved relics was remarkable.

With matched grants being available for heritage projects through the Bicentennial Scheme and the Commonwealth Employment Programme, the possibility of rebuilding a working Purrey steam car now seemed possible. The City Council co-ordinated the restoration project from 1982, reconstruction being supervised and managed by Mr. Doug Press, the Passenger Transport Manager, in the bus workshops. Mr. David Neish of the National Trust group and Mr. Steve Kele, a local machinery merchant with a lifelong interest in steam machinery, were members of the sixteen-man Council Steam Tram Committee.

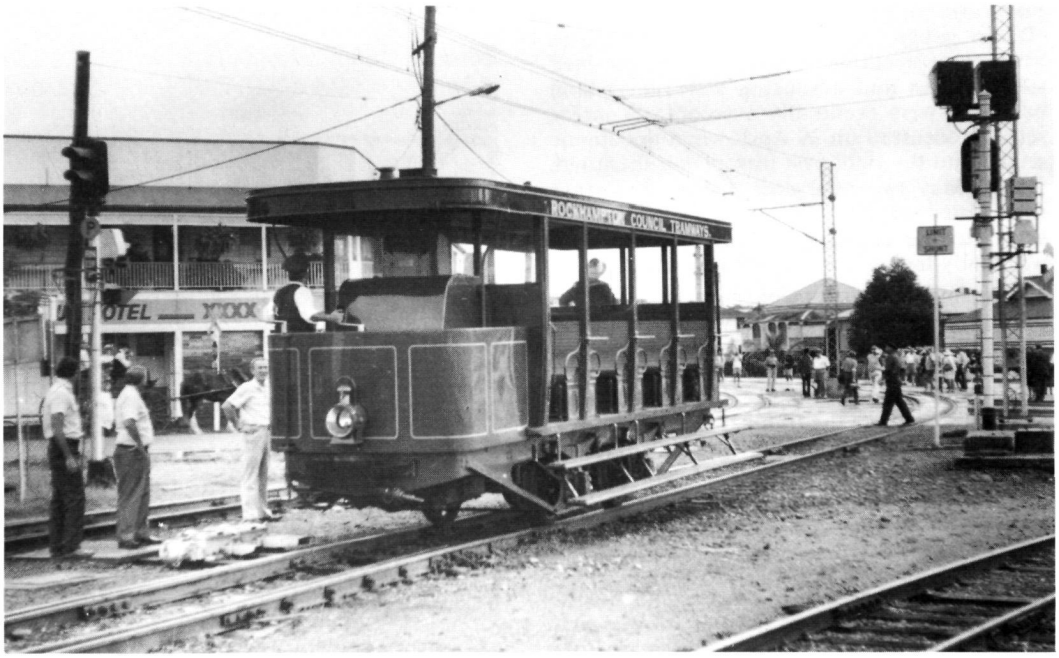
The saga of this major restoration project has been reported in this magazine since 1976. During the reconstruction, parts were located in many unusual places. The Antique Machinery Society in Brisbane provided a Purrey steam engine unit which once powered one of the Queensland Railway steam cars. A genuine Purrey boiler steam feedwater pump was discovered in the Ipswich Railway Workshops. A complete water tube boiler was found on a Biloela farm which provided the patterns for the new unit. A plethora of parts were found at the North Rockhampton Scout Camp where at least one trailer and two power cars were taken in 1940. Local residents, as well as tramway enthusiasts, returned a considerable quantity of collectable souvenirs to assist the project.

The most unusual coincidence occurred in 1985. A back hoe unearthed two leaf spring buffer units when carrying out excavations behind the old tramway workshop site to extend the bus parking concrete slab. These items were in sound condition and required little major work before being fitted to the new tramcar.

The project was officially launched in June 1984 at the Transport Ball which was held to mark 75 years of continuous public transport operation by Rockhampton City Council. This

The Purrey steam car and Queensland Railways railmotor RM16 stand in Stanley Street while the Rockhampton City Band form up across the intersection. Official guests enjoyed a champagne breakfast at the Railway Training Centre on the site of the old railway station, seen in the top right corner of our photograph.

BOB MERCHANT



8.45 am on 5 June 1988. The Purrey steam tram moves under the new 25 kV overhead wire from the Rockhampton station yard into Denison Street for the recommissioning ceremony. KEN McCARTHY

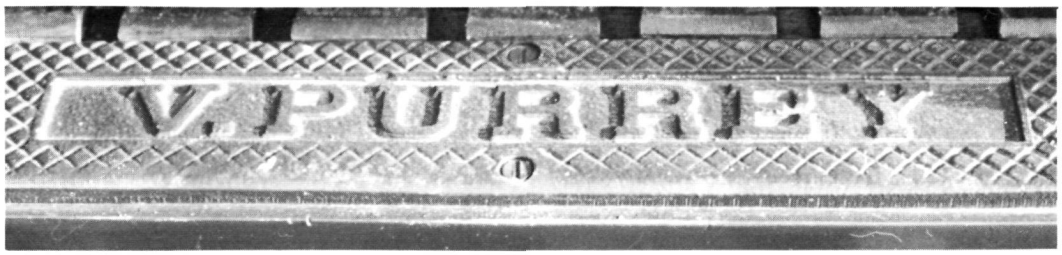
is now the longest continual period of municipal transport service in Australia.

During March 1985 after preparation of working drawings and a period of resource co-ordination, work commenced on the construction of new main frames. Many industrial undertakings assisted with the project. The Rockhampton firm of Burns & Twigg, who conducted much of the heavy engineering work during the original tramway period, worked on the new boiler components. Mr. Peter Olds of W. Olds & Sons of Maryborough renovated the main engine unit using new cylinder castings manufactured by Fidax Foundry of Sydney. The Queensland Railways carried out work on the running gear, their main contributions being the reconstruction and supply of wheels, axles, bearings and axle boxes.

As the reconstruction progressed on the old Canning Street tram depot site, two public open days held during June 1986 and February 1987 drew large crowds and much favourable publicity.

During the latter half of 1987 the tram was placed on wheels, the body fitted out, the steam motor unit and boiler placed in position. On 24 December 1987 the tram operated under steam for five hours with the frame blocked up to allow the wheels to revolve freely.

On 28 March 1988 the tramcar was transferred to the Central Queensland Cement



V. Purrey step-plate on the restored tram. BOB MERCHANT

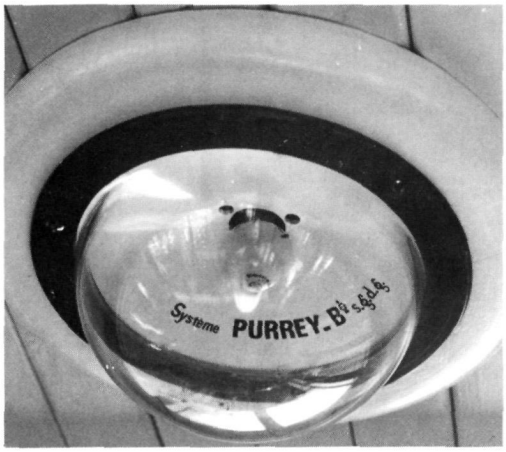
plant and on the following day it ran on the 3ft 6in gauge sidings at that factory. There were some teething problems with jammed steam valves and a sticking water level float but these were eventually overcome. A major setback occurred on 29 April when the engine seized and the right cast iron piston fractured. On 10 May two new steel pistons and rings were fitted to the engine unit. With three weeks to the recommissioning day the tram was ready for service . . . at a cost of $211,925.

The main North Coast railway passes through Rockhampton along double tracks in Denison Street. For five city blocks the tracks are paved in the manner of a street tramway. The Railway Department allowed the City Council to operate the tramcar from 7am until 4.30pm on Sunday 5 June for a distance of just over 1km in Denison Street between Stanley and Fitzroy Streets, traversing four city blocks along a neighbourhood of shops, hotels and houses.

During the first few days of June, Rockhampton had been deluged with unseasonable rain. In fact several downpours occurred on Saturday evening, the day before the recommissioning. The weather lifted on Sunday morning and by 9am the city was experiencing a clear warm day.

In vintage clothes, City Transport Manager Doug Press gives a resume of the steam tram restoration project during the ceremony. KEN McCARTHY

Mayor of Rockhampton Jim Webber cuts the ribbon to mark the completion of the steam tram restoration project. A similar floral arch was erected in William Street for the official opening of the tramway on 5 June 1909. BOB MERCHANT



The interior lights were originally acetylene gas lit with the change to electric lamps powered by batteries taking place during World War I. The reconstructed vehicle has been fitted with electric lamps for convenience. BOB MERCHANT

The steam tram was wheeled out of its temporary home, the rail motor shed near Stanley Street Station, around 5am when steam was raised. By 6.30am it had steamed onto the former town wharf branch line in Stanley Street where minor servicing was performed and photos taken of the tram outside the two-storey restored colonial railway office block. Considerable interest was created when the Purrey car was joined by Queensland Rail Motor No. 16 in Stanley Street.

Around 8am the very large contingent of invited guests were entertained to a champagne breakfast in the Railway Institute building at the old Stanley Street Station. Just prior to 9am the tram moved from Stanley Street into Denison Street to the arch and platform in Derby Street. The location was packed with a crowd in excess of 2,000 people . . . a little greater than that which witnessed the original opening ceremony in William Street on 5 June 1909.

The official party included Alderman Jim and Mrs. Webber, the Mayor of Rockhampton; Alderman Ron and Mrs. Peters, the Mayor of Maryborough; Railway Superintendent Mr. Kevin Neil; and Mr. Laurie Strange, the Queensland Bicentennial Autho-

The Purrey steam car in Denison Street at Stanley Street at 1.20pm. The tram is receiving a routine service with clinker being removed from the fire box and the ash being drawn from the ashpan. KEN McCARTHY

The Purrey car seems at home in the Rockhampton streetscape, seen here on 5 June 1988 in Denison Street at the Denham Street intersection. KEN McCARTHY

rity Chairman. Mr. and Mrs. Doug Press were certainly pleased that the weather had cleared and Doug expressed the wish in his speech that the tram, affectionately known as "Old Red," would behave itself during the day . . . he need not have worried; the very high standard of restoration resulted in the tram working without a hitch for the entire day.

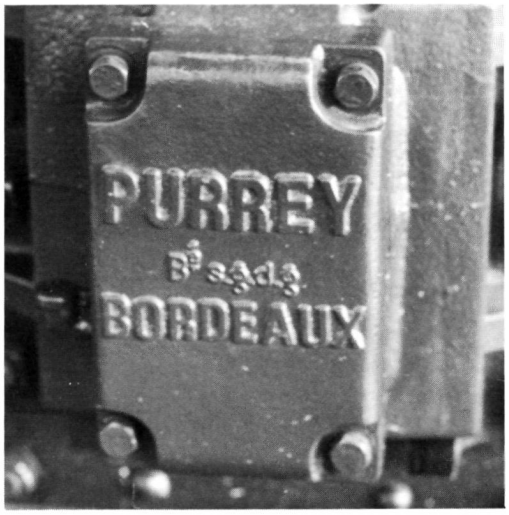
Just prior to the Mayor cutting the ceremonial ribbon Mr. Mike McCarthy, the General Manager of the *Morning Bulletin*, presented a cheque for $20,000 to the Mayor as a contribution towards the construction of a permanent tourist tram route.

Following the ceremony the tram made several trips for invited guests along Denison Street and at 9.30am public service commenced at $1 per trip between Stanley and Fitzroy Streets. To handle the crowds, which by late morning amounted to almost 4,000 people, trips were limited to one direction, the return journey being made in former Sydney double-deck Atlantean No. 1169 which is now in the City Council bus fleet.

Although the tram only seats 40 passengers, over 2,600 were carried on 5 June. Many potential riders had to be turned away at 4.15pm when the last trip departed resembling peak hour in Calcutta!

Some unusual features of the operation and some highlights of the day should be mentioned here . . .

The tram was operated by a joint Council and Queensland Railway crew. Reg Davis and Jim Bambrick were the assigned drivers. The Council personnel carried "R.C. Tramways" on their hat bands which blended with their vintage uniforms. The railway guard was resplendent in a uniform with loops of piping up the sleeves topped by a white pith helmet. As the crew grew more familiar with the tram's operation, so did the service speed increase. By late morning it was traversing Denison Street at 60 kph.



A Purrey of Bordeaux axlebox cover. BOB MERCHANT

The tram was free of pollution and very quiet in operation. The new chain drives were silent while the only obvious sound was the occasional working of the steam water feed pump. When driven under load a soft beat could be heard, the frequency of which was quite rapid due to the chain gearing between the engine unit and the road wheels. The tram was drawn up to the Denison and Stanley Street corner for the occasional service stop where water was replenished and the ash and clinker removed from the firebox pan.

The bus drivers and workshop staff at the bus depot have been very interested in the project. They can now hold lengthy conversations on feed pumps, horn blocks, eccentrics and Dee valves as could their colleagues prior to 1939!

Several former tramway employees were present at the day's events. All seemed to gain a new lease of life on the strength of the occasion.

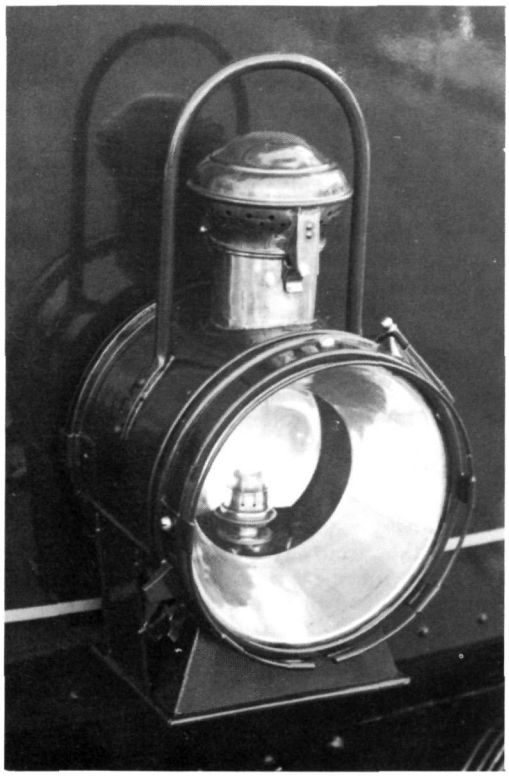
As the tramcar traversed the Denison Street route for the first time it was accompanied by a wave of loud applause along the entire kilometre. Several in the crowd, who were boys during the tramcar era, were heard to call out "two with sauce" as the tram steamed through the city. The cars were known as "pie carts" during the 1930s.

At the conclusion of the day's activities Doug Press was a pleased but relieved man . . . the occasion had been a resounding success and the tram had operated faultlessly. He had experienced many sleepless nights as the target date loomed closer . . . he solved many mechanical problems with only photos to help him . . . the co-ordination job was in addition to his usual heavy workload as Council Transport Manager, which includes both the bus fleet and the airport traffic. Let us hope he will now have time to return to his main leisure activity of golf.

The Council is now gearing up for regular tourist tramway operation. The underframe of an open toastrack trailer is to be fitted with a new body, and three Billard diesel locomotives have been donated by Citra Construction.

These diesel units were used on the recent local railway electrification contract and will enable the tramway to operate regularly without the need for continual steam working. The Mayor has obtained an open toastrack horse car from Andalucia Park, near Surfers Paradise, and this can be converted to operate on both flange wheels and pneumatic road tyres. This car has been repainted in Tramway colours and operated on 5 June in Denison Street on road tyres hauled by a tractor to relieve the load on the Purrey car.

The cross bench horse car at the corner of William and Denison Streets. This tram normally operates on flanged wheels but can be fitted with pneumatic tyres for off-rail running and it ran in this mode during the day hauled by a tractor. KEN McCARTHY



The kerosine headlamp was picked up in a Paris flea-market. BOB MERCHANT

The tramway's permanent home has been narrowed down to two routes. One school of thought wants the tram service to traverse the old railway wharf track in Stanley Street and then run along the river bank in Quay Street in the historic city precinct. The other proposal requires track to be built from a tourist centre adjacent to the highway on the southern edge of town from where it will skirt Yeppen Lagoon to terminate in the famed tropical Botanical Gardens. This proposal links across the former Dawson Road and Gardens terminals served by the 1909-1939 tramways.

Both proposals require almost 2 km of 3ft 6in gauge tramway. On the evening of 6 June the City Council came out in favour of the Yeppen Lagoon to Botanical Gardens tourist route, so the next stage of this very interesting project should commence soon.

During dinner on Saturday evening 4 June, Doug Press was a person from whom a mantle of worry was about to be lifted in 24 hours time. Peter Olds, on the other hand, had his mind on possible future restoration activities. He has been involved with the restoration of Queensland Railway locomotive B15 class No. 299 (built by Walkers of Maryborough in 1897) to working order and has an international reputation as a live steam model engineer. Peter expressed the proposal over dinner that as all the patterns and working drawings are now available, another Purrey steam tram could be built for half the cost of the original project. Doug Press's response to this suggestion was to gaze into the distance and possibly dream of his favourite golf course!

Further Rockhampton Notes

A 48-page book dealing with the history of Rockhampton steam trams entitled "Rocky's Puffing Billies" was prepared for the recommissioning ceremony.

The history was prepared by Judy Nicholson and in addition to material acknowledged from the ARHS *Bulletin* and *Trolley Wire* the author has been able to present new information obtained from Council records and the local press.

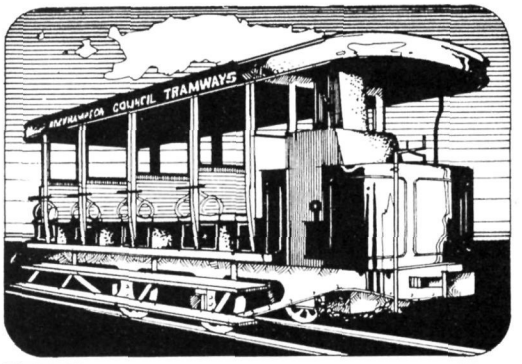
This new publication was released at a ceremony held at North Rockhampton Municipal Library on Friday evening 3 June.

The tram was fueled on a mixture of Blair Athol coal and industrial coke obtained from Mackay.

The front kerosene headlamp was causing some concern as the Purrey car restoration neared completion. A Citra Corporation official identified the lamp from photos as being a standard French railway model from the turn of the century. The Citra representative was able to obtain an identical unit from a flea market in Paris and this was delivered by M. LaCosta during March 1988.

The firm of Purrey constructed over 200 steam tram units for street operation around the turn of the century. We believe that this is the only example of his products in operating condition.

Valentin Purrey (1861-1928) would have been very pleased with the Rockhampton activities of 5 June 1988.



Rockhampton City Council
Bicentennial Project
Sponsored by
Rockhampton Branch National Trust of Queensland

Peak hour in Rockhampton! The last run of the day at 4.15pm approaches the Denison Street-William Street intersection. BOB MERCHANT

Former Atlantean bus No. 1169 and the restored Purrey tram near Fitzroy Street in Denison Street, Rockhampton. The 1972 bus contrasts with the 1909 steam tram to span 75 years of continuous Municipal transport. KEN McCARTHY

NEWCASTLE TRAMWAYS

PART 6 — THE 1905 TO 1908 PERIOD

INTRODUCTION OF ONE MAN OPERATED MOTORS

by K. McCarthy

This is the sixth article in the series dealing with the history of the Newcastle Tramways which operated from 1887 until 1950.

Earlier parts have appeared in this magazine:

Newcastle to Plattsburg	February 1977
Expansion of 1893-4 Period	June 1980
Construction of 1895-1901	October 1982
Expansion Demands 1900-03	April 1983
Merewether Beach and Carrington Construction	April 1985

The 1905 to 1914 period witnessed major expansion of the Newcastle Tramway system. After four years of construction inactivity a short branch line between Adamstown Junction and the new Racecourse was commissioned in 1907. This first stage in construction activity, which would see the Newcastle network double in size over the short period of seven years, was mainly brought about by economies caused by the introduction of one man operation on steam tram motors.

This part of the series outlines the introduction of one man motors, the early operation of the water street sprinkling service in Newcastle, the opening of the Racecourse tramway and the rolling stock strength of that period.

One Man Operated Steam Motors

The last regular passenger services worked by steam trams in Sydney, those to Abbotsford and La Perouse, were converted to electric operation during 1905. Although steam motors continued to haul passenger trams to special fixtures after this date, regular steam services were restricted to the isolated Sydney outer suburban routes as well as Newcastle, Broken Hill and (after 1909) Maitland tramways.

In the interests of economy the second man on the steam motor, who was classified as a "fireman", was removed from July 1905. It was felt that his role as a "lookoutman" was superflous with the withdrawal of steam trams from busy Sydney streets.

Newcastle One Man Motor Operation

This change took place in Newcastle as a trial on 10 July 1905. A press report which appeared in early August 1905 stated that the single man operation of tram motors was giving unsatisfactory service,[1] even on the long route to Wallsend. The Railway and Tramway Commissioners at that stage intended to continue the trial. The savings brought about in operating costs were expected to enable the planned extension to Waratah to be constructed.

Conversion of Motor 105A

The first tram motor converted for single man operation was No. 105 (with the added suffix 'A'). This unit was released from Randwick Workshops after major alterations on 24 June 1905 and was transferred to Newcastle on 9 July.

The end platforms of 105A were extended and the controls duplicated so that the driver could control the vehicle from the front platform rather than beside the boiler within the body of the motor.

Trip gates were fitted under the front to drop the plough type life-shield automatically if an obstruction fell under the vehicle. Linen roll destination boxes, as fitted to electric cars, were provided on the front and rear aprons so that the driver would not have to handle the heavy board-type signs at terminals. The linen rolls on 105A carried the coloured symbols but the lettering was displayed as black on a white background.

105A operated on the Merewether Beach tramway but problems soon emerged with this new design:

a. The overhang on the extended end platforms caused some difficulties with trailer haulage. Major coupling alterations would be required if this style of motor was adopted as standard.
b. The driver was exposed to wet and cold weather on the front platform.

c. The driver had to hold his arms above his head for much of the journey to work the controls located under the end canopy.

The overhang coupling problem was overcome by restricting the motor to the Merewether Beach route while the fitting of a glass windshield provided protection for the driver. The remaining problem could not be avoided if this conversion design was adopted for the entire fleet.

Newcastle Style Conversion of 11A

To overcome these problems the Newcastle Workshops carried out alterations to motor No. 11. Very little change was made to the body structure of that engine. The controls were retained within the body of the vehicle but were duplicated so that the driver could control the tram from inside near the front right hand door (or left hand rear side). This arrangement was known as "diagonal controls". The front headlamps were taken from the bulkhead and relocated on the roof, while large glass windows were fitted to the front bulkheads above the boiler to improve the front and rear vision.

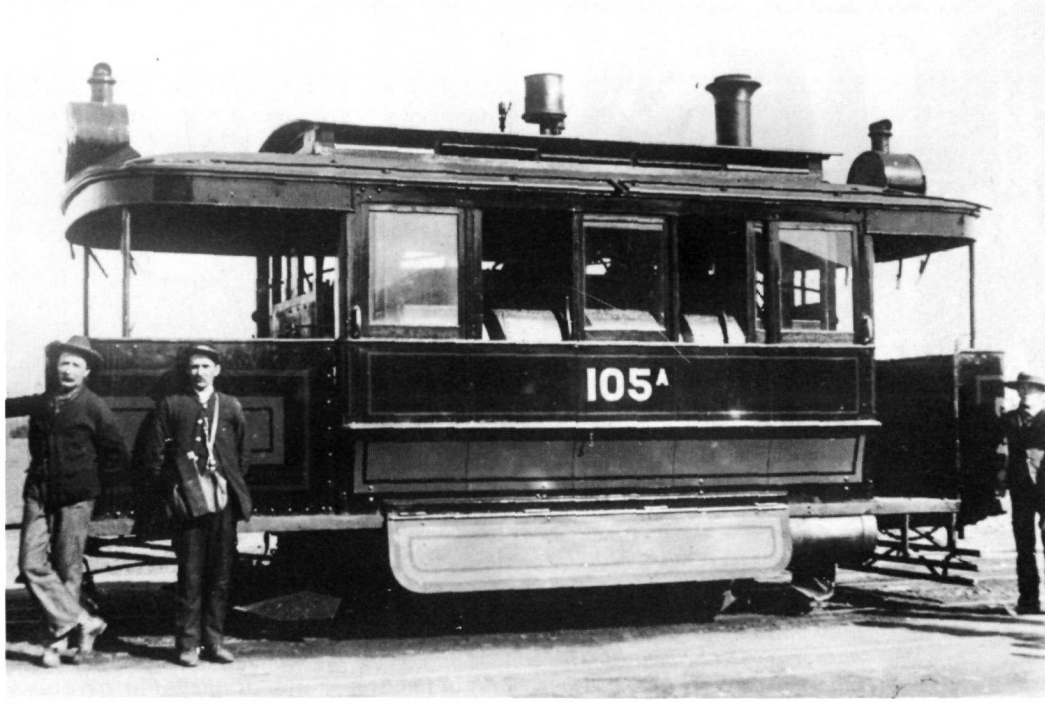
This simpler style of conversion was adopted as standard, not only in Newcastle but for the other NSW steam services.

The *Railway and Tramway Budget*[2] reported on the change to one man operation eight months after the introduction of the scheme. It was revealed that a total of 55 motors were in service at that time on the NSWGT routes isolated from the main Sydney system:

Newcastle	25 motors
Broken Hill	6 motors
Sans Souci	3 motors
Burwood and Parramatta	11 motors

The two motors used by the NSWGT on the East Maitland to Morpeth railway and the two held in reserve for the Manly tramway (then being worked under contract with horses) were not included in this working total.

The article indicated that the conversion had been introduced on "these small systems" to reduce running costs. The design alterations were made so that the driver had full control of the machine without assistance from a fireman. The fireman's main task had been one of "lookout man" in busy city streets. To assist the driver on the one man motors the regulators, other levers, as well as the injectors were duplicated just inside the cabin on the right hand side on diagonally opposite corners. The driver was situated on the opposite side to the conductor to exchange



'One Man Motor' 105A on arrival at Newcastle during July 1905. K. MAGOR COLLECTION

single staff tokens at passing loops and to communicate with drivers of other passing trams.

The vacuum brake mechanisms were improved. Originally these were fitted with two separate handles, one for "application" and one for "release". In the altered design these were replaced with a single handle. Automatic life-shields and fenders replaced the former style which was dropped by the fireman.

The converted motors also received a roof gong from withdrawn cable grip cars so that the whistle would not have to be used in street running. A bunker was constructed on the rear right hand side platform in which sufficient fuel for four hours operation could be stored. A goose neck hand brake staff was provided at the leading end platform to secure the motor when it was detached from the cars or when the driver was "oiling around".

Prior to the conversion the fireman worked the points at junctions. This task was taken over by conductors after July 1905.

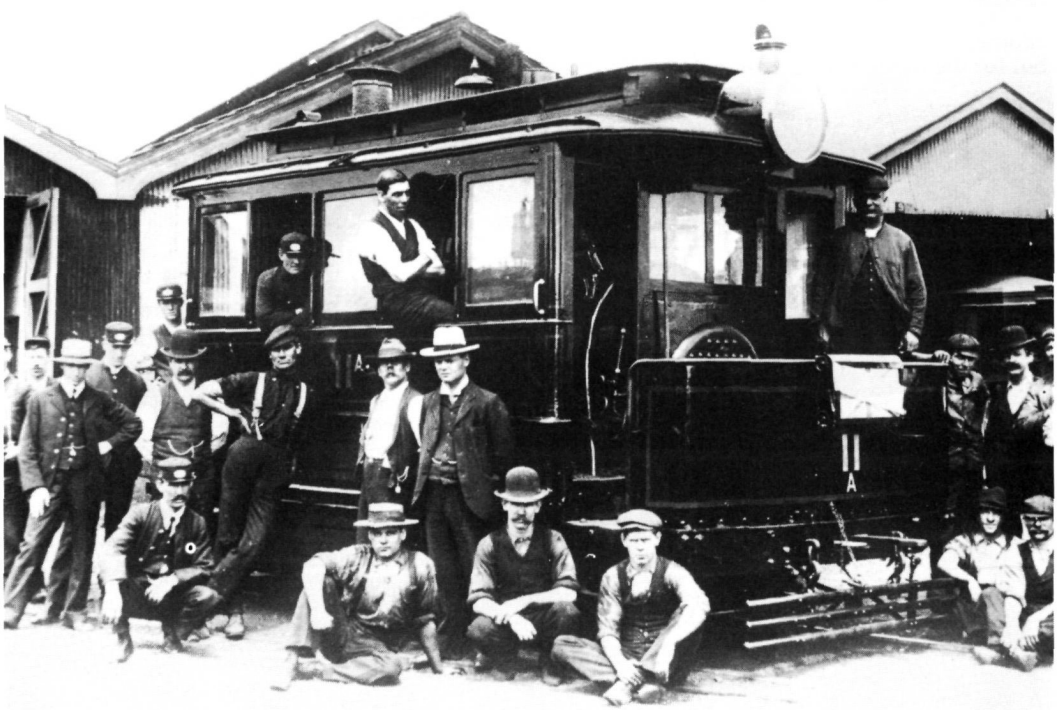
Fleet Number Changes

At this time all steam motor numbers received a suffix 'A' and the trailers 'B' in order to prevent confusion with duplicate electric car numbers. Many of the steam motors received the 'A' suffix when converted to one man operation but a small number of engines carried this suffix while still in two man operational form.

At the same time the opportunity was taken to standardise the steam tram rolling stock on a state-wide uniform numbering roster. While order was restored to the numbering scheme of the motors, the vast trailer fleet emerged with some trailers on the coastal system carrying numbers identical to Broken Hill cars 1,200 km away in that far western area of the State!

Wages for Tramway Running Staff

The conversion to one man operation in Newcastle brought about a saving of £3,625



Motor 11A at Parnell Place yards, 1905-06. This motor was the first converted to one man operational form in the Newcastle Workshops. The men posed with the engine have reason to be pleased. This conversion became the standard arrangement for one man operation. No further conversions of the Sydney style as applied to 105A, were carried out.
K. MAGOR COLLECTION

Motor 105A in Scott Street at the Newcastle Railway Station tram stop, circa 1906. This view clearly shows the glass driver's protective windshield.
K. MAGOR COLLECTION

($7250) per annum. This economy cleared the way for further steam tramway extensions.

During 1901 the following comparisons were made between Newcastle and Melbourne tramway traffic staff:[3]

Newcastle

Working week:	54 hours per week
Overtime:	Paid after 54 hours
Drivers:	8/- (80¢) per day
Conductors:	6/7d (66¢) per day
Equipment:	Clothing and watches provided.

Melbourne

Working week:	60 hours per week
Overtime:	Paid after 48 hours
Drivers:	6/6¾d (65¢) per day
Conductors:	6/5d (64¢) per day
Equipment:	Clothing and watches provided.

These figures emerged when traffic staff spokesman, Driver McLeary, proposed an 8 hour working day for Newcastle employees. Railway Commissioner Oliver stated that he would only approve an 8 hour working day if Parliament paid for it! He added that there were 3,000 men available to take over the 1,300 jobs presently occupied on the Newcastle and Sydney tramways.

By 1904 the Newcastle rates of pay were:

Drivers:
7/6d (75¢) per day increasing to 8/6d (85¢) after 3 years service.

Conductors:
6/6d (65¢) per day increasing to 7/6d (75¢) after 3 years service.

Signalman:
8/- (80¢) per day increasing to 9/- (90¢) after 2 years service.

Starters and Ticket Examiners:
8/6d (85¢) per day for first 2 years, then 9/- (90¢) per day after.

Consolidation of One Man Motor Operation

By late 1906 the steam motor drivers were complaining that the task of firing engines

while in traffic was causing some delays. These men demanded that the timetables be adjusted to allow for firing.[4]

Another grievance expressed 18 months later concerned the demand that the eyesight of steam motor drivers in Newcastle had to be 50% higher than the standard considered satisfactory for drivers of the Melbourne Express![6]

The period of time during which motor 105A operated in the trial body form is not clear. Official records indicate that this engine was out of traffic for major repairs from 18 November 1909 until 7 March 1910 when a new boiler was fitted. In all probability 105A received the standard style body at that stage.

Motor 105A remained in service at Newcastle until 27 September 1925 when it was withdrawn from traffic and stored prior to dismantling.

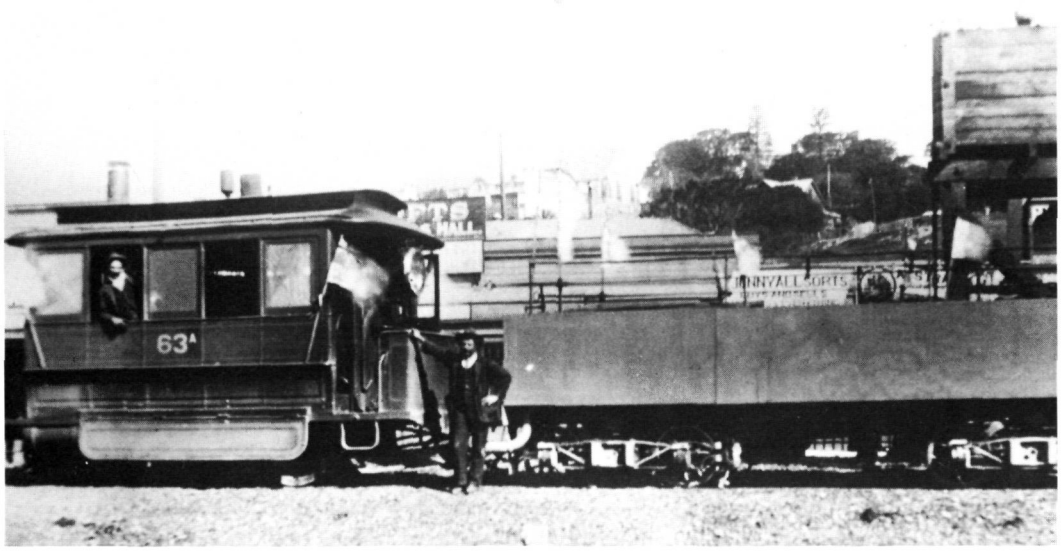
Tramway Sprinkler Cars

In October 1881 Thomas Wearne of Glebe (Sydney) won a contract to construct a four-wheel street watering tramcar at a cost of £117-10s-0d ($235).[7] Completed on 31 January 1882, this vehicle was used to lay the dust and flush the gutters in busy Sydney thoroughfares traversed by the tramways. This trailer car carried No. 1 in a water tank car fleet list and was fitted with bogies in 1885. Between 1882 and 1884 seven water sprinkler cars were constructed for use on the steam tram system. These retained their separate fleet number until 1906 when they were listed in the standard "service stock" roster.

Sprinkler No.	*In Service*	*Standard No. after 1906*
1	1882	Withdrawn 1891
2	1884	37S
3	1887	38S
4	1889	39S
(2nd) 1	1890	36S
5	1891	40S
6	1894	41S

Tramway water sprinkler No. 1 of 1882 had a capacity of 1,000 gallons while the other cars could carry 2,625 gallons.

The larger cars consisted of a rectangular iron tank, 22ft long, carried on two four-wheel bogies. Four sprinkler nozzles were fitted to the tank, one at each corner. The sprinkler car was usually propelled by the steam motor. The top of the tank did not protude above the window sill level of the motor, so the driver



Steam motor 63A and water sprinkler trailer No. 5 (40S) at the water tank in the yards at Perkins Street shed, Newcastle about 1906. Although this steam motor had received the suffix 'A' after its number, it is still in the two man operational form.
K. MAGOR COLLECTION

had a clear vision beyond the propelled watering car. Pull rods located along the top of the tank controlled the nozzle sprays and these could be manipulated from the front platform of the tram motor.

Street Watering Procedures

Street watering during the early years of this century was usually carried out by municipal councils. Carts drawn by a single horse were employed in this task. These were two-wheeled vehicles carrying a large cylindrical wooden tank similar to a barrel. The water sprayed onto the road through a horizontal perforated pipe located behind the cart just above road level. The capacity of these tanks was in the vicinity of 500 gallons.

Introduction of Tramway Street Watering in Newcastle

Sprinkler car No. 5 (40S) arrived in Newcastle on 2 November 1902 and 38S followed on 21 April 1907. Car 37S arrived from Sydney prior to 1915 when 40S was converted to a coke carrying car leaving 37S and 38S to carry on sprinkler duties in Newcastle during the steam tramway era.

As the Newcastle system spread to the distant suburbs the various municipalities requested the Railway Commissioner to introduce a street watering scheme similar to the facility provided by tramway sprinkler cars in Sydney. During May 1901 the Commissioner informed the Pattsburg Council that a uniform watering scheme could not be introduced in Newcastle.[8]

At that time the dust nuisance was becoming unbearable. Acute dust problems existed at times on the Adamstown and Mayfield tramways. The tram seats were covered in dust and passengers were forced to wipe their seats before sitting down.

The tramway thoroughfare as far as the Hunter Street West intersection with Maitland Road, Railway Street and Tudor Street was watered by local councils. This cost Wickham Council £125 ($250) per annum of which the Railway Commissioner paid £40 ($80), while the Newcastle Council was allowed £137-10s-0d ($275) per annum. The Newcastle Council used a single horse drawn watering cart for this task but the watering costs were expected to increase if a planned motor wagon sprinkler was introduced instead of the tramways taking over the job.

The Tramway Authority stated that an additional tram motor, sidings and stand pipes would be required if the sprinkler tram system was introduced. An editorial in the *Newcastle Morning Herald* concluded:

> 'The general public will look forward with pleasure to the time when the Newcastle District will have a proper system of watering the tram lines and when influenza and blood poisoning by dust will be things of the past.'

During September 1901[9] the press reported that the dust nuisance was so critical in Maitland Road that the Mayfield tram could not be seen in the dust cloud! In January 1902 the Railway Commissioner finally agreed to the street watering request and promised that a sprinkler car would be provided "in about one year's time".

By October 1902[10] the Railway Commissioner announced that a tram motor was available to work a sprinkler service but as the tramways were already paying £1,600 ($3,200) per annum in excess water usage, which was charged at 1/- (10¢) per 1,000 gallons, some concession was required from the Hunter District Water Board. In Sydney the Water Board supplied water free of charge to the tramways for street watering.

The Tramway Department was willing to charge Newcastle suburban councils a rate of 6d (5¢) per 1,000 gallons for street watering. This was similar to the subsidy already paid by the tramways to Newcastle and Wickham Councils for street watering.

As mentioned, tramway sprinkler car No. 5 (40S) was transferred from Sydney to Newcastle on 2 November 1902 but this vehicle was reported as "lying in an old railway yard" (Perkins Street Depot yard) in January 1903 and the press report demanded that it be "put into prompt use".[11] Alderman Creer had recently noticed a sprinkler car in use on the North Sydney tramways and felt that this service brought the dust nuisance under control. The North Sydney watering service was carried out by a four-wheel electric sprinkler 28W which had entered service (as sprinkler car No. 7) on 28 May 1900.

The Newcastle tramway watering service commenced on 10 January 1903. By mid March[10] the Railway Commissioner threatened to withdraw the service unless local councils defrayed the cost or the local Water Board agreed to provide water free of charge. The Commissioner felt that the tramways were contributing enough towards this community service by providing the watering tram and the labour to work it.

Withdrawal of the Sprinkler Service

By June 1903 street watering was costing the Commissioner £1,000 ($2,000) per annum of which £250 ($500) was for the purchase of water.[13]

The Railway Commissioner announced on 29 June that the watering service would cease on the following day. The councils had been warned of the heavy costs being carried by the tramways in a letter of 2 March 1903 so the councils would have to make their own arrangements from 1 July.

The tramway watering scheme had used 2,800,000 gallons from 10 January to 30 June 1903.

The Newcastle Council meeting held on the evening of 29 June 1903[14] was informed that the tramways were receiving water at 6d (5¢) per 1,000 gallons which was the actual pumping cost to the Water Board. The Hunter District Water Board's response to the request for free water was that the Railway Commissioner did not give the Board free freight for pipe delivery on the railways!

It should be noted that the water piped to Sydney from the distant Nepean Catchment Area was delivered by gravity. Local pumping was only required to reach some of the high level suburban reservoirs. On the other hand all Newcastle water had to be pumped from the Walka pumping station located upstream from Maitland.

During 1902 some 8,000,000,000 gallons of water was delivered to Sydney from the Prospect holding reservoir. Of this 5,000,000,000 gallons were lifted by pumps to service reservoirs, the remainder was supplied by gravity. Sydney water cost 6d (5¢) per 1,000 gallons to reticulate but the Newcastle supply cost 1/3d (12¢) per 1,000 to the premises. The Sydney Water Board lost 6d (5¢) per 1,000 gallons when it supplied the tramway sprinklers with free water while the Hunter Water Board lost 9d (7¢) per 1,000 gallons when it charged 6d (5¢) per 1,000 gallons!

A deputation of local businessmen with the Hunter Water Board during July[15] failed to solve the problem. On Saturday 4 July 1903 a strong westerly wind caused dust storms in Maitland Road Tighes Hill as well as in Scott Street in the business area. Drivers and conductors experienced great difficulty in this wind while passengers were dusty after travelling along Hunter Street.

A deputation to the Railway Commissioner held on 26 August 1903 only resulted in Chief Commissioner Oliver repeating that the tramways would pay 2/3rd of the street watering costs if councils would pay 1/3rd.

The "Dust Nuisance" again became a live topic during November 1903. On Monday evening 23 November the road dust was so thick on the Mayfield tram that it was impossible to see from one compartment to the next! Passengers left the tram covered in dust condemning the false economic considerations which prevented the resumption of tramway street sprinkling.[16]

A newspaper editorial of that period observed that the taxpayers would pay for a sprinkler service in the long run, so the Hunter District Water Board Act should be changed to enable water to be supplied free for such a service. The article concluded that employees deserved to work in a dust free situation and this could possibly be brought about if each tram motor could "push a device in front to lay the dust".

Part of the problem was due to the use of crushed sandstone being used as a road surface material in Newcastle while crushed blue metal (basalt) was the material employed in Sydney.

Mr Millner, the Hunter District Water Board President, informed a deputation on 15 December 1903 that his Board was compelled to give water for street cleaning until 1897 when it was discovered that the Act demanded 6d (5¢) per 1,000 gallons must be charged.[17]

Although the Water Board offered sprinkler water to the tramways for 6d (5¢) per 1,000 gallons, the Tramways Department had to pay twice this price for its reticulated water supply while local councils were charged 2/- (20¢) per 1,000 gallons. To reduce its water costs the tramways installed a steam pump on the sandhills at the Newcastle terminus near Parnell Place Depot to supply the steam motors.

Resumption of Tramway Water Sprinkling

The Public Works Department agreed to guarantee the street watering charge of 6d (5¢) per 1,000 gallons until 30 November 1904. This enabled the tramways to resume the sprinkler service in January 1904. The Minister for Public Works, however, was not prepared to continue this expenditure beyond 30 November.[18]

Although the Hunter District Water Board was willing to reduce the water strinkler charges to 4d (3¢) per 1,000 gallons as a temporary compromise the Railway Commis-

TRAMWAY 1907

sioner would still only meet the tramway component costs.

A deputation which met the Minister for Public Works, Hon. Charles Lee on 26 January 1905 claimed that several Newcastle municipalities did not have the power to charge a watering rate. Mr Lee agreed to refer the matter to State Cabinet as the Mayfield, Broadmeadow and Merewether tramways operated on roads under the control of the Public Works Department.[19]

During November 1904 the Newcastle Council offered to again water the tramway thoroughfare in their municipality as far as Railway Street Wickham for £137-10s-0d ($275) per annum. One year later the Railway Commissioner agreed to pay Newcastle Council £11-9s-2d ($22.92) per month for this service using salt water. This commenced on 20 November 1905.

Although no further references to the street watering services emerged in the Newcastle press for the period up to 1910, the transfer of sprinkler car 38S from Sydney to Newcastle on 21 April 1907 indicates that some agreement must have been reached which enabled the tramways to resume the service.

The sprinkler service continued to operate in Newcastle until the closure of the tramways in 1950.

Newcastle Racecourse Tramway

The main Newcastle Racecourse prior to 1907 was situated west of the Glebe tramway near the present intersection of Kemp and Farquar Streets in an area later known as Garden Suburb or South Hamilton.

A new racecourse, to be sited south of Adamstown Junction and east of Adamstown, was designed in 1902, and construction was commenced in early 1903. This was situated on an area bounded by Chatham, Dumaresq, Beaumont and Darling Streets, Hamilton. During May 1906 a deputation from the Newcastle Jockey Club was introduced to the Minister for Public Works, Hon. Charles Lee. These racecourse representatives requested that a branch tramway be constructed from Adamstown Junction at Broadmeadow to the new course along Chatham and Turnbull Streets to the rear of the new grandstand. The estimated cost was expected to be £4,000 to £5,000 ($8,000 to $10,000).[20]

The deputation revealed that 21 race meetings had been held at the old course during 1905 at which attendences ranged from 1,500 to 5,000 per meeting with an average of 2,000. The Jockey Club felt that an 8d (7¢) fare would be reasonable but Charles Lee felt that a maximum of 6d (5¢) would be adequate.

Minister for Public Works, Charles Lee, promised that the Racecourse tramway would be included in the list of tramways being considered for construction.

The first route proposals were compiled in September 1901. At that stage the planned tramway was to enter the racecourse property and the route only amounted to 36 chains (700 metres). The Outer Gate admission charge was to be included in the tram ticket as was the case at the Randwick Racecourse in Sydney at that time.

A year later the Jockey Club had changed the location of the main stands to the southern end of their property and would no longer permit the proposed tramway to enter the course, although the Club was willing to make the south-eastern corner of the property available for a tram terminus. At that stage the proposal was altered to avoid the expense of purchasing property from the Australian Agricultural Company for a balloon loop. The new tramway was to leave the main line in

Hamilton and outward bound trams would operate southwards along Beaumont Street and set down passengers at the main gates in Turnbull Street. Departing trams would then turn northwards into Chatham Street and connect with the main line at Adamstown Junction.

Due to the cost of resuming property at the corner of Beaumont and Tudor Streets Hamilton the original proposed access along Chatham Street was adopted in November 1902.

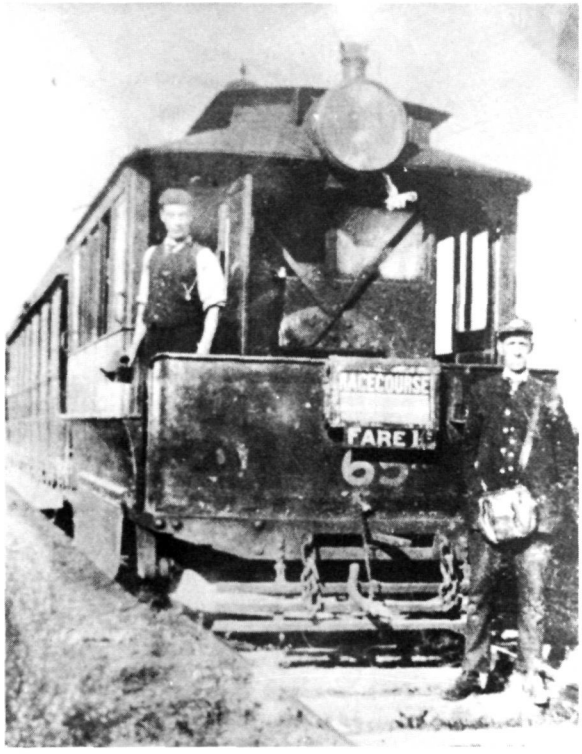
By May 1904 the Jockey Club threatened the tramway authority that if a balloon loop terminus was constructed then the club would concentrate its efforts on providing for omnibus and road vehicle traffic and would not design entrances for tramway traffic!

The Jockey Club requested a double line terminus along Turnbull Street to the eastern boundary of their property with scissors crossovers for shunting. It seems that the Jockey Club was still afraid that it would have to surrender some of its property for a balloon terminal loop.

At this time the southern boundary of the racecourse property was extended one chain (20 metres) southwards cutting across the Turnbull Street boundary. In addition, water mains were located along the tramway alignment near Turnbull Street. These factors forced the tramway authority to purchase unappropriated land for the terminal loop. This move satisfied the Jockey Club and enabled the tramway to avoid the problems of shunting steam trams on a dead end siding surrounded by crowds of passengers.

On 14 February 1907 the tender of £2,025-16s-3d ($4,051.62) submitted by Messrs. Champion, Goddard and Goddard was accepted for the construction of the Newcastle Racecourse tramway. The track length was 1 mile, the ruling grade 1 in 500, the sharpest curve 1½ chains radius and the plant to be used was 60lb rail. A double track junction branched from the Adamstown leg of the existing junction in Winship (later Denison) Street. This became single track at Everton Street. The tramway traversed Chatham Street southwards and ended in a balloon loop at Darling and Turnbull Streets. Turnbull Street was only an alignment at that stage and was never extended westwards in the vicinity of the tram terminus.[21]

The new tramway was handed over for traffic on 1 July 1907. The estimated cost of £3,930, which included the main line junction, was exceeded, the final amount being £4,165-18s-10d ($8,331.88).



Motor 65A and cars at Newcastle Racecourse loop, circa 1920. K. MAGOR COLLECTION

Early Availability for Traffic

The new racecourse opened for the major carnival on Saturday 27 April 1907. Although the tramway was incomplete trams operated along the new tracks on Saturday 27 April and Wednesday 1 May 1907.

Trial trips were made on Friday evening 26 April and the gala occasion attracted large crowds to the new course. Regular trains from the far end of the Hunter Valley had to receive additional coaches to handle crowds while special trains from Sydney and Maitland were heavily patronised.

Trams on the regular Newcastle routes were so crowded that passengers were packed onto the footboards and many stopping places had to be run through. The special racecourse trams, which operated from Parnell Place, were also heavily loaded. These departed at 11-30; 11-55 am; 12-05, 12-15; 12-20; 12-30; 12-35; 12-55 and 1-20 pm on both Saturday and Wednesday.[22]

The press reported that the service on the new tramway was satisfactory considering the incomplete condition of the line. Inspector Murray directed the service from the racecourse terminus throughout the day. The *Newcastle Morning Herald* did add the comment that the extra pressure indicated that additional accommodation would be required at the terminus.

On Saturday 27 April the entire roster of 26 steam tram motors available for service as well as all passenger cars were on the road in Newcastle!

While the majority of punters travelled by tram to the course or walked from Broadmeadow, patrons who travelled in their own carts, carriages and motor cars did not fare so well. The vehicular approach was southwards along Beaumont Street, Hamilton, but only part of this thoroughfare had been "metalled". The approach to the racecourse parking area was rough and this condition caused much criticism.

The single track portion of the racecourse tramway was covered by Staff Section No. 4.

A cinder platform which raised the ground level 6 inches (150mm) above the rail height was constructed outside the main gates at the tram terminus while a coke stage and water crane were located just beyond the gates. Once the passengers left the cars would continue in a clockwise direction around the balloon terminal loop and lay up at the Chatham Street boundary. At the conclusion of the race meeting the trams would traverse the loop in a anti-clockwise direction picking up passengers again at the cinder platform. The last tram to arrive would be the first to depart. During the lay over time the tram motors would couple to the cars ahead while the first motor standing in the loop at Chatham Street would be shunted onto the rear of the last tram to arrive to make the first departure.

At the time of opening in April 1907, special racecourse tickets had not been prepared. The normal green 3d tickets were issued on the outward journey while orange 3d tickets were sold on the return inwards trip.

Motor 6A passing the fuel heap bound for West Wallsend, at Newcastle Racecourse terminus, circa 1920. C. B. THOMAS COLLECTION

Perkins St. Sheds.
N.S.W.G.R.
Hunter St.
Burwood St.
Derby St.
A.A. Coal Co.
Crown St.
Brown St.
Parnell Place
Signal Box
Scott St.
Zaara St.
Offices
Waiting Shed
Parnell Place.
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
a-b Constructed but not opened.
Hanbury St.
MAYFIELD
Maitland Rd.
North
Throsby Creek
Tighes Hill
Young St.
William St.
CARRINGTON
Wickham Loop
Mannell St.
Honeysuckle
Perkins St. Depot
Parnell Place
Albert St.
Tudor St.
Broadmeadow
Hunter St.
Scott St.
Robert St.
Co-operative Junction
Wallsend Coal Coy.
New Tunnel Crossing
Newcastle Rd.
Jesmond Loop
PLATTSBURG
Wallsend Station
Horseshead St.
WARATAH
LAMBTON
Howe St.
Hobart St.
Lambton Coal Coy.
New Lambton
Lambton Rd.
Waratah Coal Co
N.S.W.G.R.
Brickfield Rd.
A.A. Coy.
Hamilton
Turnbull St.
Cricket Ground Loop
Racecourse
Glebe Rd.
Adamstown
Chatham St.
Glebe
Burwood CC
Pelican St.
Ridge St.
Merewether Beach
Pacific Ocean
Parry St.
Loop
Newcastle
NEWCASTLE TRAMWAYS 1907
0 1 MILE
0 1 KM
K.McCarthy 11/86
To Newcastle
New Tunnel Crossing.

Parnell Place Terminus

By 1907 the terminal arrangements, rolling stock storage capacity and workshop facilities at Parnell Place were severely overtaxed. While the timber framed, corrugated iron clad sheds presented a reasonable appearance from Scott Street their rear aspect was an eyesore from the main Newcastle surfing beach, their presence being very obvious in commercial post cards of the 1900-1925 period.

The maps accompanying this article are based on a Parnell Place sketch map of 1 May 1907 and a Newcastle system map of 18 December 1907. By 1907 the covered tracks of Parnell Place depot had reached maximum capacity. An additional road outside of and to the west of the sheds (road 17) was constructed during July 1912, but by that stage the construction of a terminal balloon loop around the sheds seemed to be the only solution to cramped terminus facilities. This loop would require most depot roads to be reduced in length and portions of the rear wall to be relocated. This could not be done at that stage as rolling stock shed capacity was considered more pressing than terminus congestion.

The solutions to these problems will be reviewed in later parts of this history but during the 1908 period Newcastle Council was voicing concern at the congestion and appearance of the sheds at Parnell Place.[23]

Detailed plans were prepared for the proposed Parnell Place balloon loop on 25 May 1907. Superintendent John Kneeshaw expressed cpncern at the 80ft radius curves but Tramway Engineer G. Cowdery stated no difficulty would be experienced for a steam motor hauling four cars on the proposed loop.

Improvements to shed accommodation were completed in December 1907. On 4 January 1908 the *Newcastle Morning Herald* reported that the Parnell Place offices and waiting shed had recently undergone maintenance and repainting while the sheds and workshops "had received a great deal of attention".

Never-the-less on 21 December 1907 the Town Clerk of Newcastle Council addressed a letter to the Railway Commissioner requesting that the sheds be removed as they were a hinderance to the improvement of the beach area.

On 13 January 1908 Traffic Superintendent John Kneeshaw replied to the Town Clerk that only one or two aldermen requested the removal of the depot. This request could not be acceded to as the Parnell Place location was most economical from a tramway operational point of view and it was intended to use this location as a depot when electric trams were introduced.

Chief Railway Commissioner T. Johnson was addressed by Newcastle Mayor, Alderman Jones on the Parnell Place problem during an inspection visit on 16 January 1908. Alderman Jones stated that the Tramway Department had taken the most desirable portion of the site in 1903 after much reclamation work had been carried out by the council. The sheds prevented free access from the tram terminus to the surfing beach and while the council did not object to the location of the terminus it wanted the sheds transferred to a suburban location.

Alderman Cann suggested that the depot buildings be transferred to land owned by the Commissioner near Dalgety's Woolshed (northwards from Parnell Place) along Military Road. This land was later occupied by the large Zara Street power station.

Commissioner Johnson replied to the deputation that he had not heard any suggestions that Newcastle Corporation would bear the costs of the depot transfer. He also stated that the council had approved the depot extensions carried out during 1903 and now they suggested that this expenditure should be thrown away. Alderman Cann objected to Johnson's statement as the council had resisted the 1903 extensions but these had never-the-less taken place without council consent!

Parnell Place Property Expoansion

Prior to 1893 the Parnell Place area consisted mainly of sandhills owned by the military. This had been a military fortification area as well as the location of the first Newcastle gaol.

The Railway Commissioner obtained an area on 1 acre, 3 roods and 13¼ perches in 1893 as vacant Crown Land at no cost. During 1903 two adjacent further land parcels were obtained from the Crown Lands estate as a debit entry on £1,500 ($3,000). One area amounted to 3 roods and 14 perches while the other was 13½ perches. The council had requested that parts of these areas be reserved for an esplanade.[24]

Just prior to 1908 an area of 20.8 perches was purchased from the Scottish and Australian Mining Company. This provided an additional frontage of 65ft onto Scott Street and cleared the way for the eventual construction of the balloon terminal loop.

Belmont to Swansea Tramway

Tramway proposals between Burwood Extended Colliery (near Red Head) and Belmont, which were live issues during 1901, were outlined in parts 3 and 4 of this series. (*Trolley Wire* October 1982 and April 1983.)

By 1907 Swansea residents were requesting the construction of a 7 mile steam tramway from Belmont railway terminus to Swansea.[25]

The Adamstown to Red Head railway was taken over by the New Redhead Estate and Coal Company in 1905 and the line eventually extended to Belmont. Although NSW Government records show that this extension was opened for traffic on 23 December 1916 a report in the *Newcastle Morning Herald* clearly states that the local Members of Parliament and members of the Belmont and Swansea Progress Associations, accompanied by the President of Lake Macquarie Shire Council, met the Minister for Public Works as a deputation on 14 November 1907. The subject of this meeting was the construction of a tramway from the "Belmont railway terminus to Swansea".

The request was supported by a petition bearing 709 signatures of residents. The estimated cost of the proposal was £ 24,900 ($49,800).

Major Expansion

This account brings the history of the Newcastle Tramways to a period which was to witness major expansion to the undertaking. During the period 1908 to 1914 the system doubled in size with extensions reaching West Wallsend, Speers Point, Carrington and Waratah.

In addition the Fassifern to Toronto railway was operated with steam tramway rolling stock as an isolated section of the Newcastle Tramways during 1910-11 while the Government Railway authorities rebuilt this former privately owned railway to main line standards.

During 1910-11 the Maitland Tramways, also isolated from the main Newcastle network, opened as an undertaking operated by the Newcastle authorities.

The West Wallsend extension resulted in the tramway system reaching areas beyond the Hunter River Valley and established a terminal 15 miles 45 chains (26km) from Parnell Place. This route still holds the record for the longest city to suburb tramway in Australia.

Rolling Stock

Records reveal that on 11 January 1907 twenty-eight steam tram motors were attached to the Newcastle system while an additional 2 units were stationed on the East Maitland to Morpeth railway.

Newcastle = 28 + 3 in workshops.

1907 Number	*Pre 1906 Number*
5N (2nd)	52 then 5N*
6A	6
9A	9#
11A	11
14A	14
16A	109
19A	46 (2nd) the 19N
20A	20
30A	76 (2nd)
34A	34§
49A	49
51A	51
54A	54
57A	57
63A	63
65A	65
72A	72 (2nd)
73A	73 (2nd)
83A	83
84A	84#
92A	92
98A	98
103A	103
105A	105
108A	56 then 6N (2nd)
116A	48 then 16N
117A	45 then 18N
118A	17 then 20N
119A	47 then 21N
121A	10 then 24N
122A	22 then 25N

Morpeth = 2 motors.

31
101

Notes:
* *This unit unfit for service.*
\# *These two motors at Randwick Workshops.*
§ *This motor in Newcastle Workshops.*

A more detailed picture of the rolling stock strength at Newcastle emerges for 25 May 1908. At that stage 32 steam tram motors, 66 passenger trailer cars, 2 sprinkler wagons and 2 bogie flat trucks were attached to that district, in addition to a hearse car and a breakdown vehicle.

Steam Motors = 32 units.

6A, 9A, 11A, 14A, 16A, 19A, 20A, 30A, 34A, 49A, 51A, 54A, 57A, 60A, 63A, 65A, 72A, 73A, 83A, 84A, 92A, 94A, 98A, 103A, 105A, 108A, 116A, 117A, 118A, 119A, 121A, 122A.

Passenger Trailers = 66 cars.

C1 type 60 seater cars: 7N (126), 8N (117), 14N (120), 17N (121), 2nd 31N (124).

C2 type 70 seater cars: 1, 2, 3 (2nd 3N-195), 4 (2nd 4N-194), 5 (2nd 5N-193), 6 (2nd 6N-192), 21 (21N), 22, 23 (2nd 23N), 24, 25 (2nd 25N), 26, 27, 28, 29 (29N), 30 (30N), 32 (32N), 33, 34, 35, 36 (2nd 26N), 37, 38 (27N), 39, 40 (28N), 41 (2nd 1N), 42, 43, 44 (2nd 22N), 45 (2nd 24N), 46, 47, 48 (2nd 33N), 49, 50 (2nd 34N), 51, 52 (35N), 54, 61, 63, 70, 74, 81, 87, 88, 90, 94, 97, 99, 100, 112, 114, 118, 127, 145, 146, 147, 161, 166, 170, 186. *N.B.: Earlier numbers are in brackets.*

Sprinkler Wagons = 2 units. 38S, 40S.

Bogie Flat Trucks = 2 units. 6V, 7V.

Hearse Car = 1 unit. 27S.

Breakdown Car = 1 car. 22 (North Sydney cable trailer).

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12. *NMH:* 13 March 1903.
13. *NMH:* 26 June 1903, 29 June 1903.
14. *NMH:* 30 June 1903, 4 December 1903.
15. *NMH:* 6 July 1903, 8 July 1903, 6 August 1903.
16. *NMH:* 24 November 1903, 25 November 1903.
17. *NMH:* 16 December 1903.
18. *NMH:* 18 November 1904, 8 November 1904, 12 November 1904, 16 November 1904, 30 November 1904, 3 December 1904.
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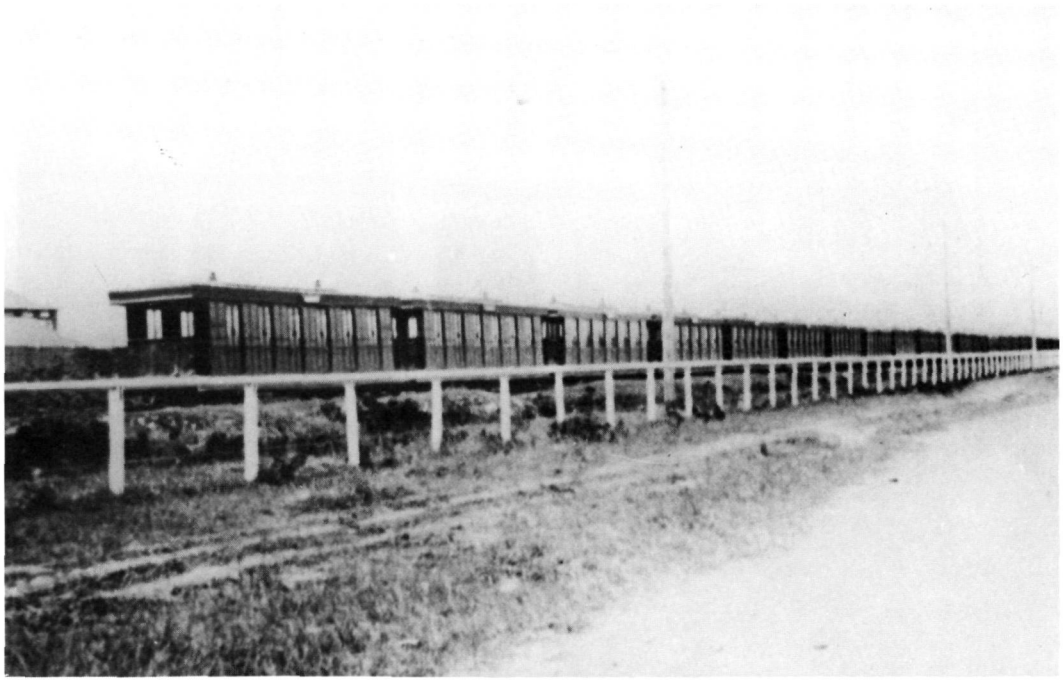


Newcastle Racecourse terminal loop, parallel with Darling Street. This view shows some 22 steam tram trailers parked at the siding during the period when Hamilton Depot was being prepared for conversion to electric traction about 1923. The trailers were parked at the Racecourse due to space shortages at the regular sheds.

C. B. THOMAS COLLECTION

HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

Hong Kong Happenings

Perth Electric Tramway Society member, Reg Francis, visited Hong Kong in May 1988 and reports major developments on both the new light rail and traditional tramway scenes.

Australian-built LRVs in the New Territories

At 10.05 am on 4 May 1988, the Victorian-built light rail vehicle No. 1007 departed the depot for Tuen Mun on the first full trip over this newly completed 23 km line. The official party followed in No. 1052.

A total of 70 LRVs are being built by Comeng under the $200 million Metropolitan Transit Authority/Leighton's contract for Hong Kong's new light rail system. They are non-articulated and have a driver's compartment at one end only. Passengers doors are on one side only and are designed for high-level platform loading.

Driver Training is now being carried out, and passenger services are expected to commence in August 1988.

Hongkong Tramways

A programme of rebodying the existing tram fleet is being undertaken. Three complete new bodies per month are now being constructed; this is expected to increase to four per month.

A rear view of LRV 1007 passing through one of the high-level platforms on the Yuen Long-Tuen Mun line on 4 May 1988. R. FRANCIS

In addition, 20 completely new trams are being built in a similar style.

The present depot and workshop sites at Happy Valley are to be sold for re-development. New depot facilities are being built at Kennedy Town and a new depot and workshops at Shau Kei Wan.

LRV 1007 making the first complete trip over the Yuen Long-Tuen Mun line on 4 May 1988.
R. FRANCIS

No. 128, the second new open-balcony tourist tram to enter service in Hong Kong, seen at the depot in May 1988. It carries a red and cream livery. R. FRANCIS

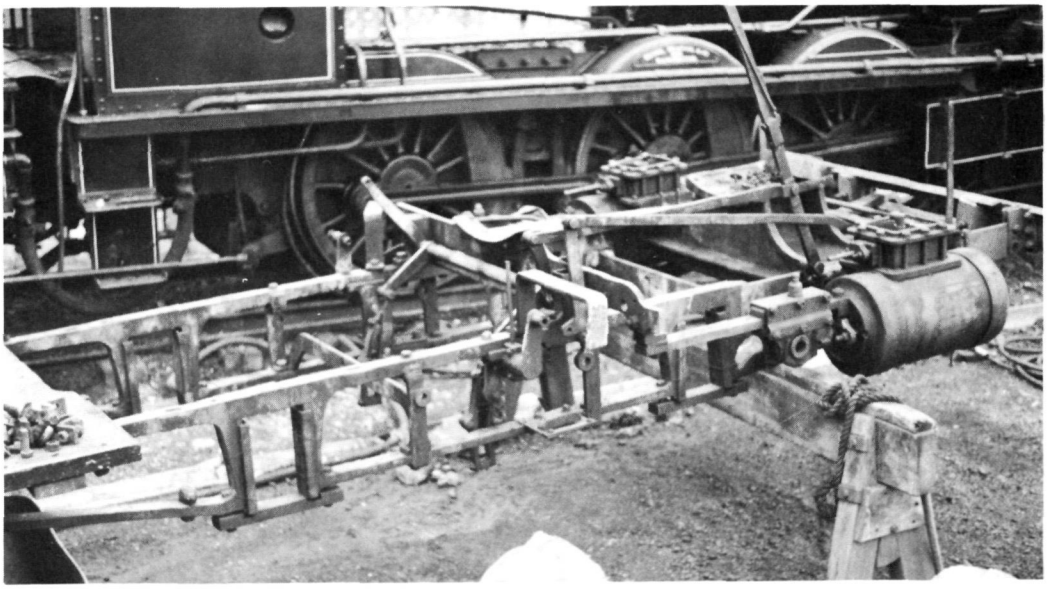
Trolleybus No. 1 was loaned to the Historic Commercial Vehicles Association for a couple of months to 30 June 1988 by the Museum of Applied Arts & Sciences. The bus was placed on display at the Association's depot in the former Tempe Tram Depot. DICK HALL

Freshly painted (in MMTB colours) Y1 class 613 crosses Flinders Street, bound for St. Kilda on a tourist working. The tram is not carrying a single passenger, reflecting the marketing problem with this service. DALE BUDD

The Newcastle Tramway Museum's W3 667 appeared on display at Maitland for the Heritage Week Steamfest over the weekend 23/24 April 1988. Access to the tram was via the goods loading platform. BOB MERCHANT

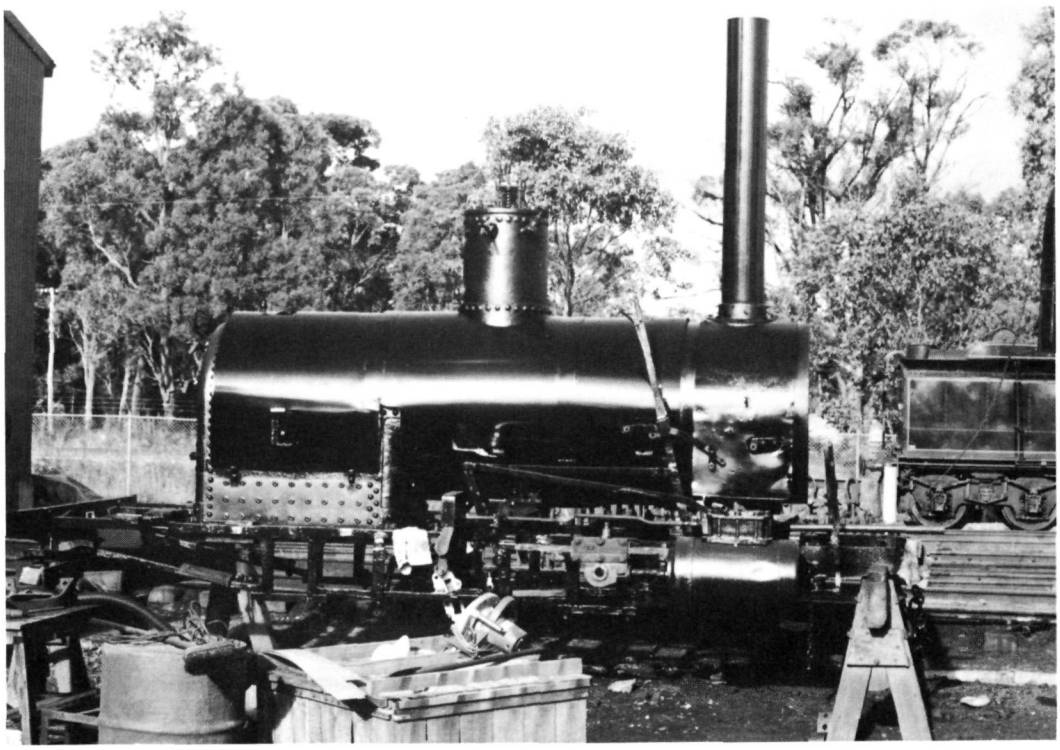
Special print souvenir tickets were introduced on Melbourne's tourist trams a few weeks before the service ceased. The tourist tram ran for the last time on 21 May 1988. Trams operating the service included L class 104, W1 class 427 and 431, W2 class 510 and Y1 class 613.

The pictorial postmarker at Glenelg Post Office was changed from 23 January 1987 to one showing an H class car with pantograph. The Philatelic Sales Centre marker is available for everyday use while the other is used for the first day of new stamp issues.



The frame and cylinders of steam motor 103A as they appeared on 2 January 1988 during the steam motor's overhaul by the NSW Rail Transport Museum at Thirlmere.

IAN DUNN



By 22 May 1988 the firebox-boiler-smokebox unit had been placed on the frames. 103A is starting to look like an engine again. BOB MERCHANT

C.O.T.M.A.

Council of Tramway Museums of Australasia

FROM BILL KINGSLEY:

Uniforms

All the obsolete MMTB brown/yellow uniforms are being sold through COTMA. You can use these uniforms at your museum. You can use individual items as smart normal wear. Anyone can purchase. Boards/committees can purchase in mass. Individuals (members and non-members) can purchase for themselves.

Keith Kings has agreed to administer sales. So all orders to Keith at 135 Through Road, Burwood, Vic. 3125, or phone Keith on (03) 836-4932. You can even arrange with Keith for personal fittings at a mutually acceptable time.

This is a fantastic opportunity. Grasp it quickly!

Trams for Sale

The second batch of obsolete W2 and SW2 tramcars have been advertised by the MTA for sale by tender and I am again co-ordinating and liasoning between the MTA and the museums involved as previously listed by COTMA as applicant for those particular tramcars. Most are available only as bodies.

BTPS Ballarat has two bodies for sale. Contact PO Box 632, Ballarat 3350.

Public Liability of Voluntary Organisations

The Victorian Governor in Council has requested the Parliamentary Legal and Constitutional Committee to enquire into and report to Parliament on matters pertaining to public liability of organisations such as ours. The date for written submissions has passed, however public hearings are being conducted. Any museums interested should contact:

Hon. L.S. Lieberman, MP
Chairing Member
Public Liability of Voluntary
Organisations Sub-committee
Parliament House
Melbourne 3000

A Resignation

Tony Smith, our hard working Assistant Executive Officer, has been recently elected to a delegate's post with his railway union. He feels that he cannot successfully serve both positions and has therefore asked to be relieved of his major COTMA responsibility. Tony's resignation is accepted with regret for we have appreciated his dynamic involvement.

Consequently, please hear an urgent plea for an enthusiastic and capable person to act as Assistant Executive Officer until the September COTMA Conference.

Tony's duties have been almost wholly with the spare parts activities, collecting from Preston Workshops, stocking at Bylands and arranging distribution. Tony has offered to help phase in a new officer and will be able to assist that person whenever needed. If you know of anyone who may be able to help then please encourage them/him/her to contact Tony or me.

The potential incumbent needs to be domiciled near Melbourne and be able to visit Preston Workshops occasionally and Bylands more frequently. It is quite an interesting and rewarding activity.

Meanwhile Tony will complete some exercises on which he is currently engaged, particularly with respect to the Bundy Clocks and the Electrical Rules.

Thanks Tony for all your help and assistance.

Electrical Operation Rules

On Saturday, 25 June we held a meeting to discuss the draft electrical rules prepared by MTPA Haddon, to whom our thanks are extended for this important initiative. These rules will be both an operating resource and a legal support. It is hoped that the final rules will be adopted commonly for all Victorian museums and then presented to the Sydney COTMA Conference. Tony Smith chaired the meeting while your EO took minutes. Present were Andy Hall (TMSV), Jack Nyman (NTM), Noel Gipps and Craig Tooke (MTPA). It was great to have Jack along from Newcastle. He spent a busy extended weekend amongst some of our Victorian museums and members.

WHITEMAN PARK . . .

Perth Electric Tramway Society

Tramcar Operation

During summer, Perth experienced a particularly severe and prolonged heatwave, but in spite of this, passenger numbers continued to be fair. Four full days' running were lost in February due to a total fire ban being imposed on the Park; trams are not permitted to operate on the main line under these extreme conditions.

With the arrival of milder weather since Easter, numbers of visitors to the Park have risen dramatically and two-car operation has been necessary on several occasions. With the full Whiteman Park tramway system now well into its second year of operation, distinct seasonal loading patterns have emerged; traffic rosters can now be drawn up with increasingly reliable anticipation of the demand.

Increased activity in the Trade Village — at the joinery, metal shop, pottery, blacksmith's shop and printer's shop — has provided a renewed attraction for visitors, and trams now stop there on most trips. Favourable publicity received by the Park recently has also helped boost loadings.

In March, operations were changed so that trams now run Lord Street-Trade Village and Central Station-Mussel Pool-Lord Street (previously, the route was Lord Street-Mussel Pool-Trade Village and Central Station-Lord Street. This change has been received well by both passengers and crews.

Rolling Stock

The W2 cars continue in their role as the 'work-horses' of PETS operations, with W4 674 mostly acting as a standby car. Ballarat 31 has only been used for special members' trips.

SW2 426, which arrived from Melbourne on 15 March (*Trolley Wire* may 1988), unfortunately could not be used for winter running this year, as a considerable amount of work is

W2 393 passing the Whiteman Park Joinery in the Trade Village on 11 July 1987. MICHAEL STUKELY

needed on this car before it will be operational.

The spare set of No. 1 trucks has been removed from under the body of F34 and pressure-cleaned in preparation for overhaul. These will be the first trucks to be fully overhauled by PETS; once they are completed it will be possible to exchange them with trucks requiring attention on service cars.

The wheels on the four Japanese 77E trucks (*Trolley Wire* May 1988) were found to have flanges too thick for Australian tramway specifications. They were sent to F.R. Tulk & Co to be re-profiled and arrived back at the Carbarn on 30 May. It is now planned to use a set of these trucks initially under Fremantle 29, which will expedite the return of that car to service.

Electrical

Our Electrical Supervisor, Noel Blackmore, has continued upgrading the power system in recent months. He has installed an overhead supply circuit breaker plus locking device in the high speed circuit breaker. An overhauled (ex W.A. Government Tramways) lightning arrestor has also been installed in the high speed circuit breaker to protect this equipment. Warning lights to indicate 'Carbarn overhead energised' have been placed in a prominent position in the Carbarn (using an overhauled trolley bus overhead line indicator light box).

Welding Equipment Donated

Cockburn Cement Ltd has most generously donated to PETS a heavy-duty Lincoln arc welder which will be invaluable for our ongoing engineering and track requirements.

Track and Overhead

Recent work in these areas has been confined largely to essential repairs and maintenance.

A temporary storage siding for various items of railway equipment was constructed on 28/29 May alongside the main line just east of the Carbarn fan.

Overhead troughing and trolley wire installation in the Carbarn extension has now been completed on all four roads, due mainly to the efforts of Duncan McVicar.

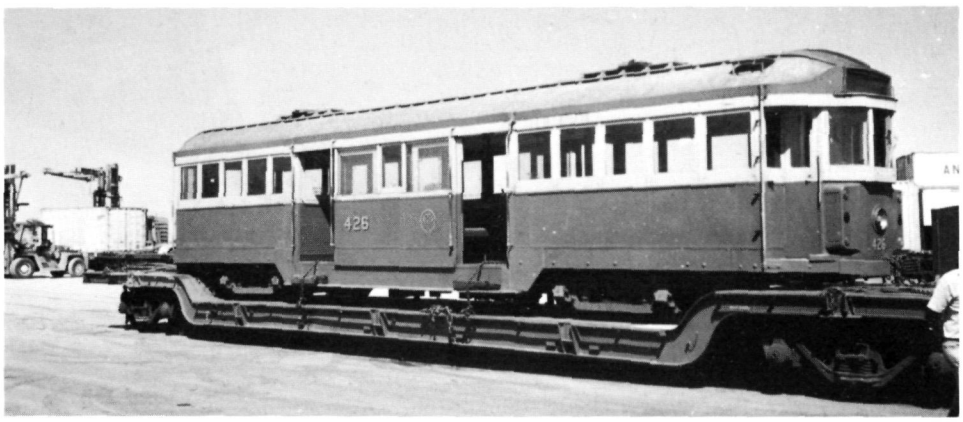
New Developments

PETS is now set to enter another phase of intensive development, with several major projects about to commence.

Building: Three new buildings are to be constructed near the existing Carbarn/Workshop complex.

- A tram body storage shed with a capacity of 6 bogie cars will provide badly-needed covered storage for the two bodies still out-of-doors behind the carbarn, as well as several others awaiting collection from various country locations.
- An electrical supply shed will house the relocated diode rectifier and associated switching equipment.
- An equipment store will provide much-needed space for major items of heavy equipment and parts at present cluttering the Carbarn and Workshop.

The State Planning Commission has endorsed the plans submitted by PETS for



SW2 426 on a well wagon at Sadleirs' siding at Kewdale after its rail journey from Melbourne, 14 March 1988. Fittings had been removed from the roof due to railway loading gauge restrictions. REG FRANCIS

these buildings; at the time of writing, the approval of the Swan Shire Council is being sought.

Inspection Pit: Planning is underway for the excavation of an inspection pit on Road 4 in the Carbarn. When completed, this will make life a lot easier for those involved in tram maintenance.

Track and Overhead: Major upgrading programmes are being planned in both of these areas, with the track upgrading expected to begin in the near future.

Last Tram — 30th Anniversary

This year marks the 30th anniversary of the closure of Perth's tramway system (the last in Western Australia), on 19 July 1958. At the time of writing, plans are being finalised for a suitable commemoration of this occasion, which will be reported in the next issue of *Trolley Wire*.

ST. KILDA . . .

Australian Electric Transport Museum

Desert Gold 186

Significant progress has been made over the past few months with the restoration of our Bicentennial tramcar — C 186, sometimes known as 'Bouncing Billy' but more popularly known as 'Desert Gold' after a well-known racehorse of the 1920s. (Their 2 × 50hp motors made them reputedly the fastest class of single truck cars in Australia.)

The roof (excepting the two ends) has been covered with dynel in lieu of the more conventional canvas, malthoid or fibreglass. Dynel is a loosely woven fabric which is bonded to the roof timbers using a slow setting epoxy resin. The same resin also serves as a waterproof adhesive for laminating the end canopy facing and, with the addition of

Chris Dunbar (left) and Max Fenner placing the dynel fabric on the roof of car 186. PAUL SHILLABEER

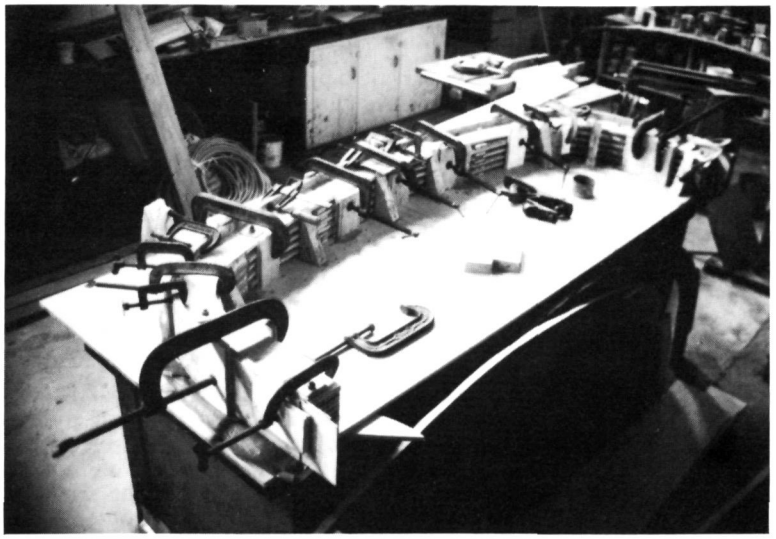
talc powder makes an excellent wood and metal filler. The covering of the main roof took a team of five half a day — much quicker than any previous methods of car roofing. The dynel has also added significantly to the strength of the roof — members working on the roof no longer have to tread very carefully.

The use of dynel covering was suggested by our contract carpenter, Chris Dunbar. In fact rate of progress over the last few months has been largely due to Chris. He has assisted the AETM with coachwork skills we have never seen before. Chris is a TAFE Carpentry lecturer and is a member of the Picchi Richi Railway Society at Quorn in the Flinders Ranges. Chris also designed a wood steaming apparatus and constructed jigs to shape the new cabin roofing timbers (the original timbers had extensively rotted). The wood steaming 'machine' consisted of a tea urn with a new lid made to enable steam to be led off through a short hose to a metal steaming box (made of two pieces of channel section welded together). A simple rack was constructed inside the steaming box to keep the roof lasts upright and clear of one another. They were steamed six at a time for three hours. The steaming lasts were then placed in a wooden jig and compressed to the desired curvature using sash cramps.

Steam bent oregon boards for the western end cabin were fitted, then removed, given two coats of shellac, varnished and reinstalled, producing a most pleasing effect. This section of roofing has been sealed ready for the dynel coating. The eastern end boards have also been fitted, removed, shellaced, and have received their first coat of varnish prior to refitting. Both cabins have had their window frame uprights completed. Chris constructed another jig to laminate the two end curved canopy covers from marine ply.

Varnish work on the motorman's bulkheads is well advanced, and new plywood upper panels have been cut and processed ready for installation. The four new sheets of ceiling plywood have been installed in the western drop-end. Sheets for the eastern drop-end are being prepared. Gutter metal (ex C 171) has been trial fitted and will be installed permanently when dynel of the roofing is completed. Trolley planking has been made and is ready for installation following painting of the roof. The saloon bulkhead panelling has been dismantled and new plywood inserts cuts and prepared for fitting.

The Road 2 track extension leading into the new Bodyshop. PAUL SHILLABEER



The jig made by Chris Dunbar to laminate car 186s end canopy covers.

The "Steam Machine" — a tea urn (left) with pipe leading into the channel box.

The jig used to compress the steamed oregon lasts to the required shape for car 186.

ALL PAUL SHILLABEER

CSO workers preparing the paving base around the new Display Gallery.
PAUL SHILLABEER

One of the new laminated canopy covers fitted to the western end cabin of car 186.
PAUL SHILLABEER

Other News

Although the main emphasis is on the completion of car 186, a few other activities continue. The Road 2 workshop track has been extended into the new Bodyshop, and preparatory work has been carried out for the temporary removal of the rear wall of Road 6 to enable the relocation of cars 15 and 355 from open storage on Road 6 into the Bodyshop.

The CSO workers continue to provide assistance around the site. The lineside poles have now been repainted as far as the loop. Brick paving has been constructed around the Display Gallery. Winter mowing is also a regular task.

The spare W2 bogie which went to Glengowrie Depot in December 1986 when one of car 264s motors caused some problems has now been returned to St. Kilda.

A combined launch for car 186 and the opening of the new Display Gallery is planned for the end of the year.

Annual General Meeting

The 31st Annual General Meeting of the AETM was held on 27 May 1988. The new committee is: *President*, Colin Seymour; *Vice President*, Paul Shillabeer; *Secretary*, Trevor Triplow; *Treasurer*, John Hoffman; *General Manager*, Jim Burke; *Operations Manager*, Max Fenner; *Rolling Stock Manager*, Chris Andrews; *Site and Safety Manager*, Warren Burt; *Track and Overhead Manager*, Peter Keynes; *Trustees*, Christopher Steele, Ron Jenkins, Max Fenner.

Once again Trevor Triplow delighted us with vintage tramway films.

Some further phots of horsecar 18 which was recently relocated from the Tramway Museum at St. Kilda to a horse-drawn vehicles museum in the Barossa Valley. Car 18 in King William Street South preparing for the Century of Street Transport celebrations on 11 June 1988. JOHN RADCLIFFE

Horsecar 18 (with canopy) taking part in the Glenelg Tram Golden Jubilee celebrations in Jetty Road, Glenelg on 16 December 1979. JOHN RADCLIFFE

HADDON . . .

Melbourne Tramcar Preservation Association

Electrical

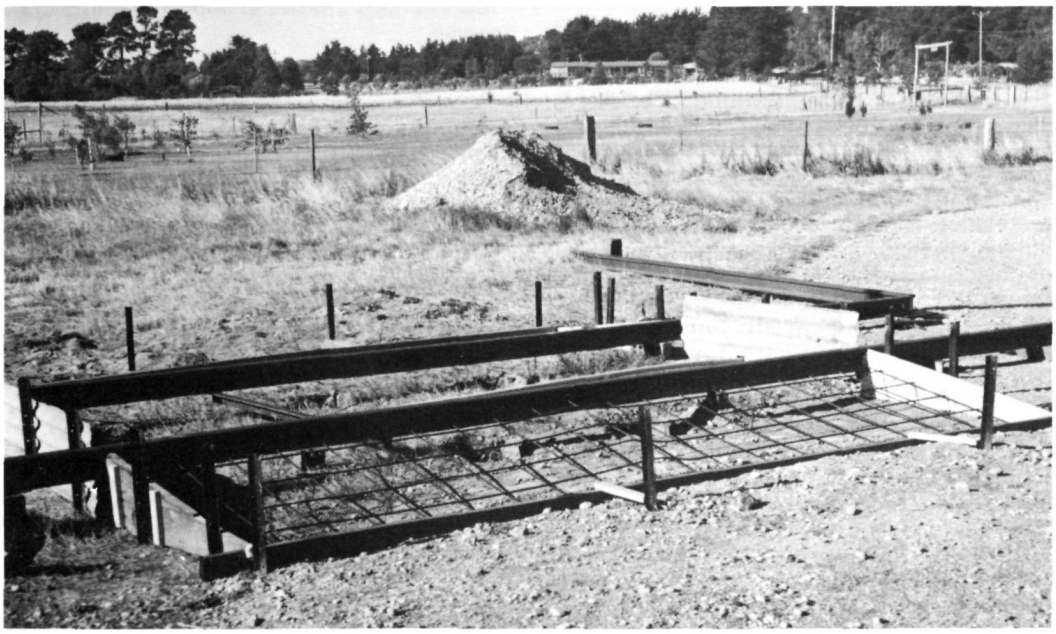
The cabinet for the 24 volt relays and interrupter unit has been installed in the substation, with local wiring now taking place.

Permanent Way Notes

No. 2 road was completed during January with the welding of ties and rail joints. Work then commenced on the top end terminus. Rail from the stack was selected and towed into position, elevation and alignment established, and during March the laying and welding was completed. As this terminus track cuts across the vehicle driveway, two short lengths of rail were removed to allow access by road vehicles, pending the pouring of a concrete level crossing.

Concrete work has recommenced with priority being given to the construction of a level crossing which was formed and poured during April. Concreting then continued back from the level crossing which is situated mid-way along the terminus road, through the No. 1/No. 2 road point castings to the "Vee" crossing block. The centre sections of the No. 3/No. 4, No. 5 mainline, No. 4/mainline and mainline/workshop points were also poured. An additional length of track has been connected to the mainline opposite the running shed in readiness for the laying of the curve around the back of this building. During May, numerous truckloads of gravel were delivered and spread between the mainline and No. 2 road, as well as filling in between the completed track work and shouldering both sides of the mainline and depot fan. The finished result is most pleasing and will allow the tower wagon access, to erect the overhead.

Also during May work commenced on laying No. 1 road. A backhoe was utilised to dig trenches in front of the workshop building because the track is at ground level at this end, with rising gradient towards the No. 1/No. 2 road points. Rails were then laid from the



A view of the formwork for the concrete level crossing.

A2 class 300 at the Port Melbourne terminus during the Association's tour.

shed, and rail bending for the curve undertaken. During June the final connecting and welding took place. With the completion of No. 1 road, the entire depot fan trackwork is finished and activities will now be concentrated on the mainline. Prior to the spreading of the gravel, the point box drainage system was laid and connected to the respective point castings and the discharge end connected to the main stormwater system via the sump pit, on along the truckshop pathway.

Restoration of W4 670

Work during the past two months has mainly concentrated on the saloon side panels which were badly knocked about, with numerous dents requiring filling. The North side storm rail which had rotted out was replaced with a new length, kindly obtained from the Mteropolitan Transit Authority, Tram and Bus Division via COTMA. The two side destination mechanisms were finally installed after adjustments and new catches fitted to the destination box lids. Work has commenced on fitting the new glass to the quarter panel windows, with two already completed. Two front destination boxes have been thoroughly stripped and rebuilt by Arthur Ireland who is also doing an additional two in readiness for W3 663, the next car to be restored. Refitting of the route number boxes has also commenced, with the East end unit having modified top rollers fitted.

Museum Site Activities

During March the main frames of W2 222 and L105 which had been stripped of all usable fittings and brackets were sold for scrap. The removal of these frames has considerably enhanced the appearance of the front fence line. Also, as part of our ongoing programme of site clearing, numerous trailer loads of rubbish have been taken to the tip during June.

In conjunction with the connection of No. 1 and No. 2 roads from the workshop building to the depot fan, opportunity was taken to complete the concrete path across the front, and a concrete spoon drain was then installed next to it, running under the No. 2 and No. 1 tracks to carry away run-off water. In addition, the truckshop pathway brick retaining wall was extended 1 metre to allow the filling to be spread.

Poison Trailer

As the area that requires weed killing continues to grow each year (around trackwork) it was decided to build a trailer with a tank and spray unit capable of being towed by a tractor or road vehicle. The chassis of an old off-road vehicle was obtained from member Frank Schroeders and work then commenced on modifying it for its special function. This has involved considerable cutting and welding of the framework and the manufacture of an 'A' frame. The supports for the tank are the next item to be attended to.

Tram Tour

On Saturday 27 February a tour was organised, utilising tramcar A2 300 on which members and guests visited the St. Kilda and Port Melbourne light rail lines in addition to an inspection of the shortly to be enlarged North Fitzroy depot. This was the first Association organised trip, and a special thanks is due to our volunteer crew of driver Alan Ripper and Ron Scholton for making it such an enjoyable day.

BYLANDS . . .

Tramway Museum Society of Victoria

Work Parties

During the warmer weather every opportunity was taken to do an enormous amount of outside tasks, such as track maintenance, resleepering the track from 'the gate' to the proposed passing loop, and overhead adjustment and maintenance. All the above tasks were co-ordinated by General Manager Andy Hall. The results of the physical work by members proved very satisfactory. A big thank you to all concerned.

With the onset of the cooler weather, overhead installation has been carried out in No. 1 shed by Allan Arthur and Peter Bardho with assistance from other members from time to time. Yes, No. 2 Road is nearly complete.

Trams

Len Millar is still working on W3 667 and, by golly, it is beginning to look a picture, now this project is well under way.

The defective sanding gear on 16W has been replaced by Andy Hall, whilst Len Millar has been attending to the tram's trolley base.

MT42 is being dismantled for parts by Rod Atkins and David Leek. These fittings will be ideal for restoration of Maximum Traction 43.

Car 634s No. 3 motor caused some problems and a replacement was provided by the MTA. Our thanks are offered to Keith Allendar and Jack Opperman of Preston Workshops for their help; and thanks too, to the MTA for their generosity once again.

Annual General Meeting

TMSV members should not forget that the date for the Annual General Meeting has been fixed for Saturday, 20 August 1988, commencing at 2000 hours at the Stanhope Street Hall, Malvern.

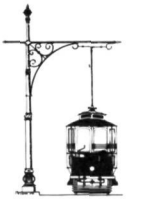
The track gang at work at Bylands on 20 December 1987. PHYLLIS SEDGWICK

Stuart Turnbull gets some physical exercise removing dog spikes. MICHAEL NORBURY

Len Millar at work lubricating the trolley base on Wheel Transport car 16W. MICHAEL NORBURY

Tim Leek assists Geoff Dean to adjust a bracket arm using Byland's tower trolley.
PHYLLIS SEDGWICK

LOFTUS . . .



South Pacific Electric Railway

Opening of Picnic Area

The official opening of the Sutherland-Lakewood Sister City Picnic Area was held on Saturday, 23 April with a ceremony at the Tramway Museum organised by Sutherland Shire Council. The day chosen turned out to be the only fine Saturday in what later proved to be the wettest April for sixty years.

Guests from Lakewood City, Colorado, who had been in Australia for a Bicentennial Sister Cities Conference in Townsville, were able to make their way south for the occasion. Some 35 residents from Sutherland's sister city arrived at our northern car park and were transported to the Museum by tram.

The Australian and U.S. flags were raised on the Museum's flagpole as the first tram crossed Pitt Street and made its way up Tramway Avenue.

The National Anthems were played and a contingent of Cronulla marching girls formed a guard of honour beside the dias. Vince Rowe, incoming President of the Sutherland Sister Cities Committee, introduced those present and handed over to retiring Committee Chairman Fred Glover, who gave an address of welcome. Museum Chairman Bob Cowing said a few words on behalf of the Museum and Councillor Carol Provan, Sutherland Shire President responded.

Carol then presented a cheque to Vince Rowe as the Shire Council's donation towards the work carried out by the Sister Cities Committee's members at the Museum.

Mayor Linda Shaw of Lakewood City was delighted to find that the Picnic Area was not a contracted job but was indeed a community effort with citizens, Council and the Museum

Sutherland Shire President, Alderman Carol Provan addresses the guests at the opening of the picnic area on Saturday, 23 April 1988. BOB MERCHANT

all taking part. This cheerful lady even took credit for the day's fine weather!

President Provan and Mayor Shaw jointly unveiled a commemorative plaque beside the picnic area entrance. The rock on which the plaque is affixed is one dug from the site during building operations. The flags of Sutherland and Lakewood were then raised ceremoniously up the flagstaffs over the entranceway.

Morning tea was provided by the Shire Council in the Restoration Building after which our guests were given guided tours of the Museum and its exhibits by members of the Museum Committee.

Among the guests were Robert Tickner MHR and his wife Jodie, the Hon. Don Dobie MHR, Malcolm Kerr MP, Chris Downy MP, Allan Andrews MP, and Ron Phillips MP.

The Shire Council was represented by Councillor and Mrs Michael Tynan, Councillor and Mrs Silversmith, Councillors Cheryl Hill, Hazel Wilson, Tony Parkes, Ken McDonell, and Inspector Ray Jones and his wife.

A special thank you is extended to Len Hill for his excellent carpentry and especially to Bert Peachey, who spent many long hours over several months preparing ground, laying turf, concreting and painting. Unfortunately, Bert had a prior engagement on the 23rd and was not able to be present at the ceremony, but he did drop in early in the morning to check that all was tidy and in order.

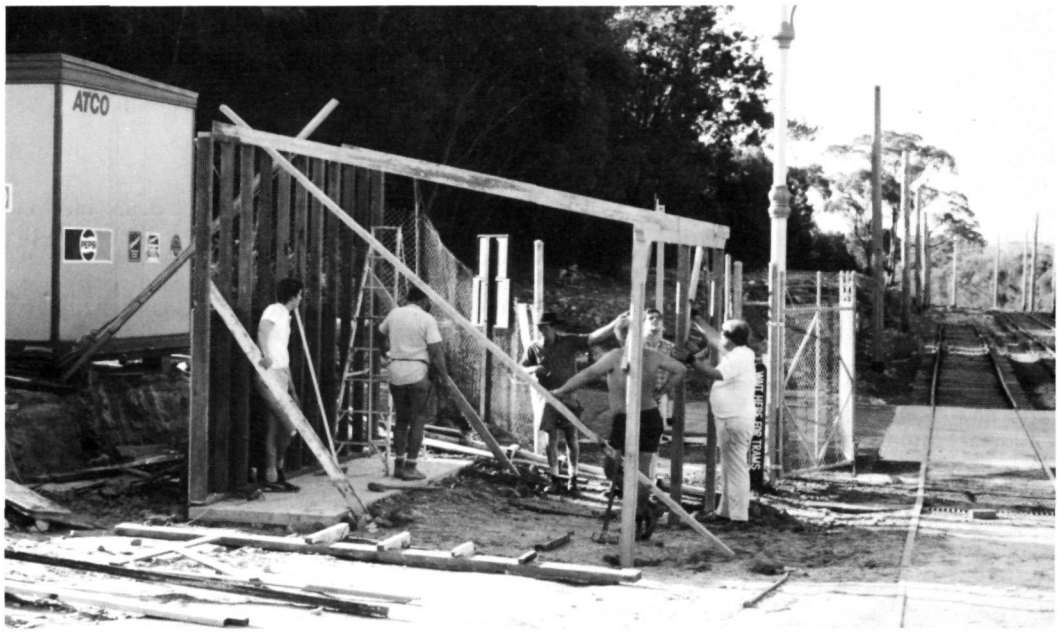
Works Progress

With the commencement of traffic operations at the new site, we have again settled in to having our workforce and traffic staff located at the one site.

There was a slight slackening of the pace following the opening as our workers caught their breath and family members got to know their wives and children again! However the pace is increasing again and progress is being maintained at a high level, with many jobs being undertaken simultaneously.

The completion of the trackwork within the Museum grounds has been given high priority, as this is one area which is creating operational problems for our traffic staff. At the present time only two cars can be satisfactority operated in traffic without resorting to rather complicated shunting movements. These problems will be solved with the completion of the diamond crossing in Tramway Avenue where the Cross Street track crosses the main line, and adjustments to the scissors crossover, to provide a second

Carol Provan, President of the Sutherland Shire (left) and Linda Shaw, Mayor of Lakewood City, Colorado, unveil the plaque dedicating this Bicentennial Sister City project on 23 April 1988. BOB MERCHANT



The former steam tram waiting shed from Miranda on the Sutherland to Cronulla steam tramway is being re-erected at the entrance to the Museum at Pitt Street. Vandalism and white ants at the National Park site have made it necessary to use a considerable quantity of new timber in the reconstruction. Our temporary sales kiosk can be seen at left. BOB MERCHANT

terminal track outside the Railway Square waiting shed.

The track panels for the second track north of the Pitt Street level crossing, which were removed for the construction of the sewer line, have been replaced and the double track between the scissors crossover and the curve north of Pitt Street, including installation of a set of points at the curve should be completed in December.

The former waiting shed from Miranda on the Sutherland to Cronulla steam tramway is being reconstructed at the Pitt Street gate. Some new material is being used in the reconstruction to replace timber which was vandalised or damaged by white ants at the National Park site.

An awning has been erected over the doorway at the public entrance to the Display Hall. The need for this awning was demonstrated during the many days of heavy rain experienced since our opening. The rain caused some concern on one Saturday when we found three inches of water rushing over the track at the Army level crossing. The bad weather has also highlighted the need for a sump pump to drain our as yet incomplete pit on Road 2 of the running shed.

Car News

Norm Chinn continues his repainting of our traffic cars and R 1740 has been completed recently, with some repainting of R1 1979 also being carried out. O class 1111 has had its roof repainted and some minor repairs effected to make it weatherproof (from above, at least). 1111 is also on the list for a repaint in the near future.

PCC 1014 continues to receive attention from Bill Parkinson and work is well advanced in making the body presentable. The paint for the car has been successfully matched and it is hoped that 1014 will be outshopped by the end of August. This car has had several successful trials along the main line, partly to test our power supply, and caused a few raised eyebrows by passing motorists while standing at the northern terminus. We all agree the car is very smooth riding.

Electrical

The second transformer has been moved into the substation and a remote starting

facility is being installed in the running shed for the convenience of our traffic staff. A cluster light has been installed over the Tramway Avenue entrance to the substation and this will give a visual indication to traffic staff that the power is on.

The lighting over the aisleways in the display hall has also been completed. A hired cherrypicker enabled this work to be completed the easy way.

Traffic Operations

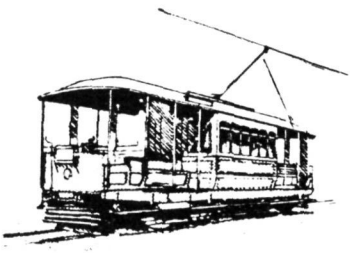
Crew training sessions are being conducted regularly in order to retrain drivers and conductors from the National Park site and to train new members of the traffic staff as conductors and drivers.

A 'terminus' tram stop has been painted on one of the poles at the northern terminus and details of our operating times are given for the benefit of visitors using the car park at that location.

One of our tramway starter's cabins has been located at the Pitt Street gate for use by our 'street conductor' now provided at that point. As part of our regular review of traffic operations, visitors are now required to pay for admission (which includes tram rides) on entering the site, or on the trams if joining at the north end car park. This eliminated the need for display hall staff to issue tickets and allows them to pay full attention to our visitors.

Annual General Meeting

The Society's AGM was held in the restoration building at the Museum on Saturday, 25 June 1988. There were four candidates for the three Board positions, including the three retiring Board members who offered themselves for re-election. Bob Cowing and Bill Parkinson were re-elected and Paul McDonald replaced Wayne Armitage for the third position. Many thanks, Wayne, for your services during your term as a Board member.



F car 393 is moved bodily sideways from Road 4 to Road 5 in the Display Hall to make way for R1 1979. Greased planks and manpower saved the cost of hiring cranes as Road 5 has yet to be connected to the Museum's tramway system. NORM CHINN

1740 and 1979 stand side by side in Tramway Avenue after 1979s return from the Royal Easter Show. NORM CHINN

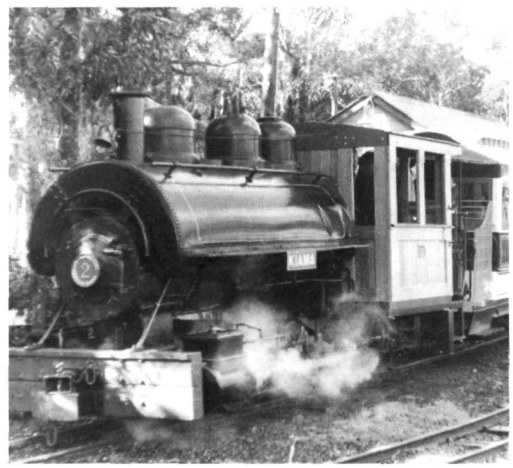
Sydney Tramway members at Rockhampton on 5 June 1988 for the Purrey steam tram re-commissioning. Left to right are John Shoebridge, Ben Parle, Bob Merchant, Peter Kahn, Lewis Nyman and Ken McCarthy. JOAN SHOEBRIDGE

ALBION PARK . . .

Illawarra Light Railway Museum Society

On Saturday, 9 April a formal ceremony was held at the Albion Park Museum to mark the return to service of Perry loco *Tully No. 6* (7967.49.1 of 1949) and Davenport engine *Kiama* (1596 of 1917). The Davenport loco had been fitted with a new cabin, floor and plumbing through a Bicentennial Grant while a considerable amount of restoration work on the Perry unit had been performed under the Commonwealth Employment Programme.

Former Melbourne cable trailer No. 430 also underwent further restoration work as a Bicentennial Authority project. Twenty new marine ply window frames have been fitted to



Right: The Davenport "Kiama". KEN McCARTHY

The Perry and Davenport locomotives draw up to the ribbon for the re-commissioning ceremony at Albion Park on 9 April 1988. Two passenger trains were in service on this occasion. The Perry hauled Queensland railmotor trailer 119 and tourist car No. 1 while the Davenport pulled cable tram 430 and saloon car No. 2. KEN McCARTHY

Perry-built "Tully" No. 6 steams out of the station yard past the former Otford signal box hauling railmotor trailer 119. The train appears to be running under military supervision!
KEN McCARTHY

this vehicle to replace the original 98 year old sashes, new canvas was fitted to the roof while the components of a new braking system are being currently fitted.

The Illawarra district experienced heavy rainfall periods for ten days prior to the ceremony, but during the afternoon the sun shone through the clouds enabling the 200 visitors to sample rides behind the restored locomotives.

Alderman Bob Harrison, Mayor of Shellharbour and State Member for Kiama officiated at the ceremony. Colin Hollis, the Federal Member for Throsby, who has given the museum considerable support over the last five years, was unable to attend, having been called to a conference in England just two days before the ceremony. Mrs. Sandra Copeland, his private secretary, however, ceremoniously drove one of the locos around the main line circuit in his absence.

The formal part of the proceedings took place in a large marque while the visiting jazz band entertained visitors in the large picnic area weather shed during afternoon tea.

Visitors and friends came from as far afield as Queensland and Victoria. The Museum was pleased to be able to thank its supporters for their past assistance during the ceremony.

Locomotives

With the successful conclusion of the April recommissioning project the working members' attention has now turned to other work areas. The first restored 2ft gauge Shay bogie, which will be used under the reconstructed locomotive, (Lima 906 of 1904 and 2097 of 1907) underwent trial assembly in April. New rectangular section steel members have been constructed to replace the corroded frame components and new channel was used for the fixed and floating bogie cross bolsters.

Work is now progressing on the restoration of the former Corrimal Coal Company engine *Burra* (Hawthorn Leslie 3574 of 1923). The main spring units are being cleaned and reconditioned while the restored cylinder blocks have been refitted to the main frames.

The Leyland Zinns petrol loco obtained from ANGMS of Woodford, Queensland in November (fitted with a six cylinder Leyland Cub engine) has been restored and is ready to receive final paint coats. The faulty mechanical fuel pump has been replaced with an

electric unit while major reconstruction was performed on the radiator. Although this engine is now in a condition which makes it available for traffic, the museum is investigating the possibility of fitting springs to the main wheel bearings to make the task of the driver more comfortable.

Signals Section

The restoration of the former Otford signal box was completed during May with the fitting of boxing under the roof eaves. This building and interlocking reaches its centenary in October. Work is progressing on the restoration of the former NSW signals obtained some years ago from the Hexham district. These will eventually be worked from the Otford box.

Track Work

Major work is being conducted on the maintenance of trackwork in the vicinity of the museum compound and running sheds. The back shunts for shed roads 4 and 5 have been completed and aligned to a common level with adjacent plant. The wooden sleepers in the compound area are being replaced by steel sleepers and the opportunity is being taken to realign adjacent pointwork and connecting the blades to spring loaded 'wharf' type switch mechanisms.

Some lengths of rail on the electric tramway have been relaid with newer components while steel sleepers are gradually replacing the wooden ones.

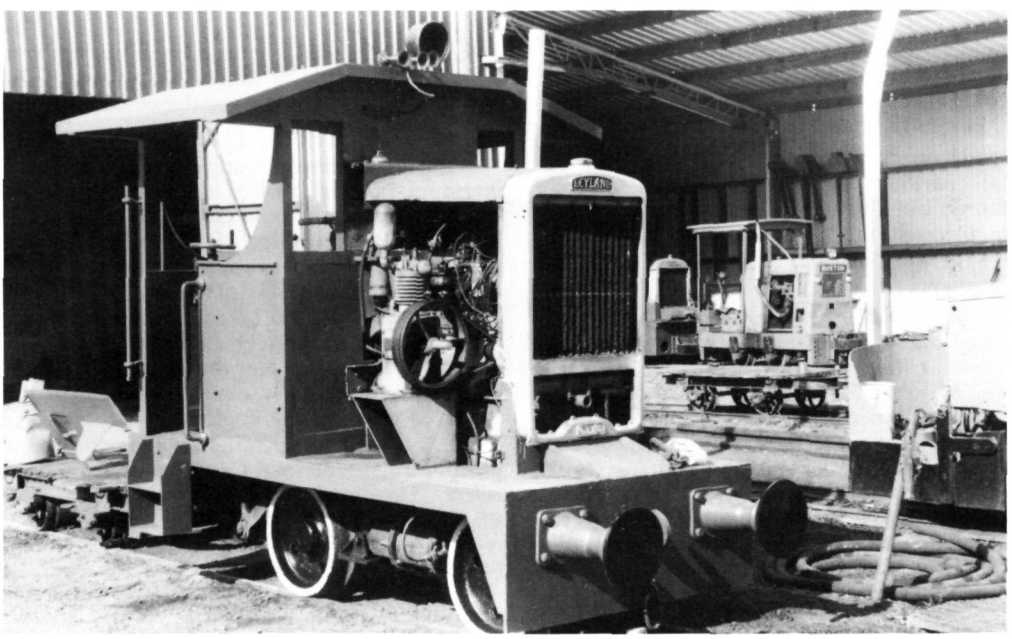
Workshops:

The museum has been fortunate in receiving further machine tools for its workshops. International Combustion Ltd offered the Society a large lathe, but when viewed it had to be reluctantly rejected as the face plate was over 5 metres in diameter! That firm has donated a large circular saw sharpening machine and a swinging docking saw to the Society and these items will soon be returned to working order.

Member Bob Hague made a generous donation of a large milling machine and this is being gradually reassembled as time permits.

The Museum welcomed the opportunity of purchasing hand tools and specialised boilermaking equipment from the former Eveleigh Railway Workshops in Sydney.

With the return of dry conditions the Museum is again experiencing patronage in excess of 500 rides on open days while the expanded picnic area is often fully occupied.



The Leyland-Zinns 2ft gauge locomotive outside the Albion Park running shed in May 1988. The air compressor seen mounted beside the engine provides power for the Brisbane tramway air brakes and the air-operated clutch. KEN McCARTHY

MUSEUM DIRECTORY

BALLARAT	**Ballarat Tramway Preservation Society Ltd.** **P.O. Box 632, Ballarat, Victoria 3350**
BENDIGO	**The Bendigo Trust** **P.O. Box 333, Bendigo, Victoria 3550**
BYLANDS	**The Tramway Museum Society of Victoria Inc.** **P.O. Box 27, Malvern, Victoria 3144**
FERNY GROVE	**Brisbane Tramway Museum Society** **20 Tramway Street, Ferny Grove, Queensland 4055**
GLENORCHY	**Tasmanian Transport Museum Society Inc.** **G.P.O. Box 867J, Hobart, Tasmania 7001**
HADDON	**Melbourne Tramcar Preservation Association Inc.** **P.O. Box 324, Prahran, Victoria 3181**
LOFTUS	**South Pacific Electric Railway Co-operative Society Ltd.** **G.P.O. Box 103, Sydney, New South Wales 2001**
NEWCASTLE	**Newcastle Tramway Museum Ltd.** **P.O. Box 82, Jesmond, New South Wales 2299**
PARRAMATTA PARK	**Steam Tram & Railway Preservation (Co-op) Society Ltd.** **P.O. Box 108, Kogarah, New South Wales 2217**
ST. KILDA	**Australian Electric Transport Museum Inc.** **G.P.O. Box 2012, Adelaide, South Australia 5001**
WHITEMAN PARK	**Perth Electric Tramway Society Inc.** **P.O. Box 257, Mt. Lawley, Western Australia 6050**

BOOK REVIEW

ELECTRIFICATION OF SYDNEY AND SUBURBAN RAILWAYS

This book is a reprint of six papers read before the Institution of Engineers Australia, Sydney Division in 1926. The series of papers has been reprinted to the same size as the original papers and gives complete technical details of the electrification of the Sydney suburban railway system in the early 1930s.

The papers are:

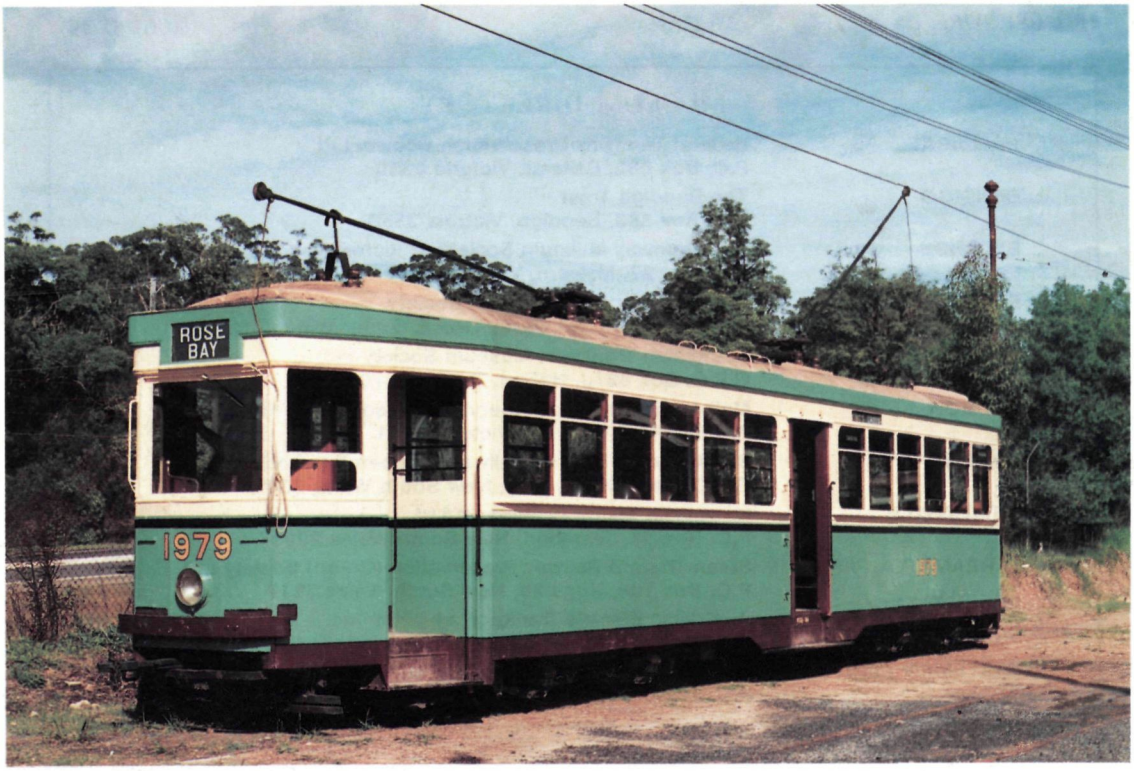
- The Railway System, Past, Present and Projected of the City of Sydney and its Suburbs — by James Fraser,CMG, Chief Commissioner, NSW Government Railwys and Tramways.
- Track and Construction Work — by R.I. Ranken, Engineer-in-Chief for Existing Lines, NSWGR.
- The Signalling System — by C.B. Byles, Signalling Engineer, NSWGR&T.
- Electric Rolling Stock Equipments, Maintenance Workshops and Inspection Depots — by E.E. Lucy, Chief Mechanical Engineer, NSWGR.
- Power Supply and Distribution — by W.H. Myers, Chief Electrical Engineer, NSWGR.
- The City Railway — J.J.C. Bradfield, Chief Engineer, Metropolitan Railway Construction and Sydney Harbour Bridge.

This book is recommended for those who desire to learn more of the history and background to the Sydney and suburban rail systems.

384 pages, 135mm × 210mm, softbound with colour cover. Published by the Australian Railway Historical Society, NSW Division. Recommended Retail Price is $25.95.

Museums should place wholesale orders with:

ARHS SALES, PO Box E129, ST. JAMES, NSW 2000



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