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- Four Days on the Tramways in Sydney
- A Night on the Tramway
- Standard Car of the NSWG Tramways

TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
MAGAZINE

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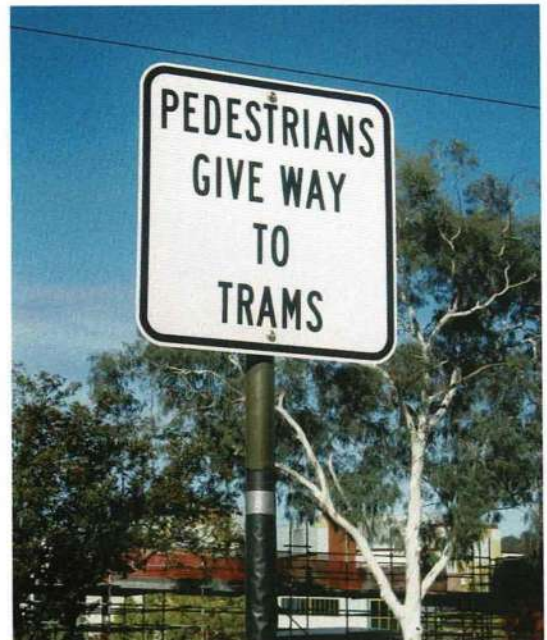
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Canberra's trams run at 70km/h on sections of the new line, sometimes outpacing parallel road traffic.



Despite official efforts to exclude the word tram in favour of light rail vehicle or LRV, this sign is complying with the ACT Road Rules and using the word that everyone understands.

Both photos Dale Budd

Front Cover:

On the first day of operation of Canberra's new tramway, 20 April 2019, car 011 crosses Bunda Street as it approaches the city terminus at Alinga Street in Civic.

Randall Wilson

Five combined articles - published in the *Daily Telegraph* (Sydney), Monday 12 January 1903, page 6.
 Tuesday 13 January 1903, page 5, Thursday 15 January 1903, page 5,
 Friday 16 January 1903, page 5 and Saturday 17 January 1903, page 10.

FOUR DAYS ON THE TRAMWAYS IN SYDNEY

(By our Special Commissioner.)

DEVELOPMENT OF THE SYSTEM REMARKABLE EFFECT ON SYDNEY AND SUBURBS FROM HORSE-TRAM TO ELECTRIC CAR

It takes three or four days to travel over the entire extent of the tramways in and about Sydney. That is what I discovered, much to my astonishment, during the past week, while engaged in investigating the wonderful development which has followed in the wake of the recent enormous extension of our tramway system.

The tourist will find that it takes him all this time, and not because of anything in the shape of snail-like speed, for the rate at which the new electric cars travel is fast enough for the veriest glutton for pace. Indeed, the latest type of tram which line been introduced, and is running on several of our lines, at a trial trip in America put up a record of over 70 miles an hour. More than a mile a minute! How the hair of the timid passenger would rise if the tram-drivers here in their ordinary runs worked up to that bat! But, of course, the service regulations would not allow it, and, moreover, the power-house here would not permit of it; so the nervous passenger need have no fear of any such breath-snatching rides.

The accompanying map (*on page 4*) shows what a network of lines there is in the city and immediately adjoining suburbs, and how the tramrails radiate in all possible directions, two lines even skirting the northern shore of Botany Bay, to say nothing of the Lady Robinson's Beach and the Sans Souci-Sandringham branch lines from the railway, which land one on the eastern shore of the big bay. Then there are three lines which whisk one out in about half an hour from the heart of the crowded city to the ocean coast-line, where the tired city man may inhale the glorious ozone of the blue Pacific. The Rose Bay route will in two or three months be extended right up to the South Head Lighthouse, so that will make a fourth of these ocean-tapping runs.

Just as all roads were once said to lead to Rome, so the great majority of the other lines lead to the waters of Sydney Harbour or to the Parramatta River or Middle Harbour—a fact due not so much to a characteristic affinity for the briny on the part of Sydney folk, but

to the physical conformation of the New South Wales capital and its suburbs. What are known as the western suburbs are served by the railway, and the Dulwich-hill and the newly-formed Zetland lines are, strange to say, about the only two that do not impinge upon some waterway, the terminus of the Dulwich-hill line itself being really less than a mile from Cook's River.

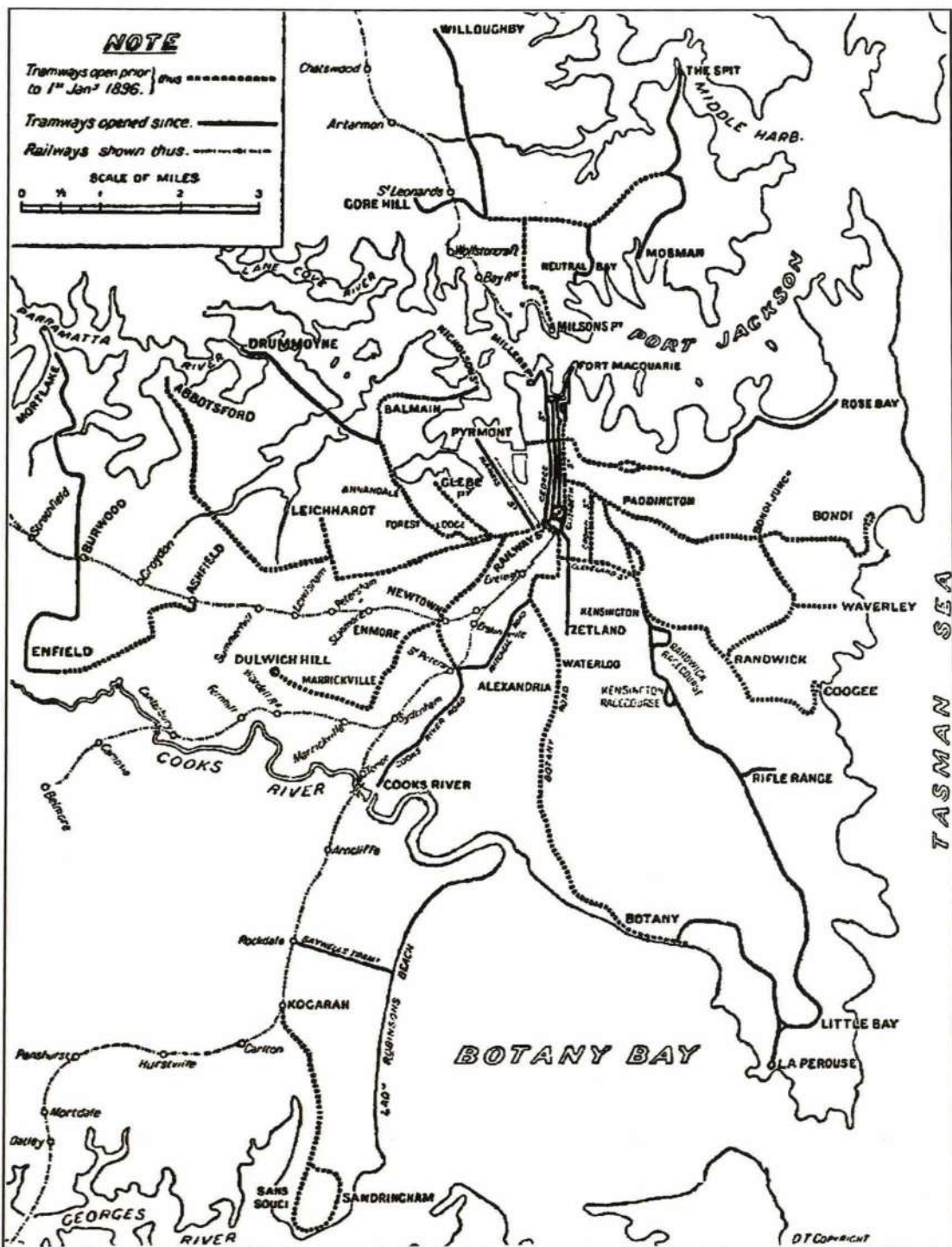
AN EYE-OPENER

A run over the lines, with a short stroll here and there, affords a veritable eye-opener as to what the new service of fast and comparatively cheap trams is doing for Sydney. A few years ago people were mortally afraid of living a few miles out of the metropolis owing to the length of time occupied in travelling to and from business. It used to be a great strain on the patience and temper to miss a steam tram when three or four miles away from the city, and have to wait a half-hour or so before the next lumbering conveyance puffed into sight. It made one vow to get a cycle and be for ever independent of them; but in most cases it sickened people of living in places that were not in more immediate touch with the roar and hum of city life. The inevitable result was that the city itself and its purlieus were crowded.

BETTER HEALTH

As with a magician's wand, all that has now been changed. The people are mostly to-day living in places several miles from the General Post-office, where, after the day's work is over, they can breathe the fresh air of heaven, and where they have infinitely more elbow-room, and are capable of rationally enjoying home and social life. This must surely all tend to the better health of the people as a whole.

An observant eye cannot fail to note another important change that the modern development in our tram service has brought about. It is clearly having the effect of decentralising business from the heart of the metropolis. In the rush and whirl of industry, when every second is golden, the various establishments could not afford in the old days to be out of immediate touch with one another, while the suburban men of business must have often felt quite "waybacks" because of their comparative isolation. The swift-speeding tramways have now brought the



great distributing centres of the city and the shops into closer relationship, and this expansion of the active business area is producing an incalculably beneficial effect upon Sydney and, it follows, upon the State generally.

THE BUILDING TRADE

If there is one fact that is impressed more than another by a visit to the various districts that the trams are opening up, it is that there exists at the present time a marked activity in the building trade. The ring of the bricklayer's trowel and the carpenter's hammer resounds on all sides. In some cases little independent suburbs have sprung into being with mushroom-like rapidity — Haberfield, on the Parramatta River side of Dobroyde, being a rather remarkable instance. It is curious, by the way, how many of the new places going up affect the red tiles.

Places within three or four miles of Sydney have particularly felt the benefit of the improved tramway service. A brisk demand for houses has set in, and vacant allotments are becoming scarcer and scarcer. Some there are who say that this impetus in building and the demand for house property is due to the hegira of people from the drought-stricken interior, and that before long, when things resume their normal condition in the country districts, there will be a re-action; but others in a better position to speak authoritatively on the subject, ascribe the wonderful growth which is now going on in the suburbs to the one cause — the improved facilities which have been created to enable people to get rapidly about from one spot to another. The all-night service, too, has made the suburbs as places of habitation more attractive than ever they were before.

FROM HORSE-TRAM TO ELECTRIC CAR

Looking backwards, what a change one notes in Sydney so far as tramway development is concerned! It is about 42 years since the first tram ran here. It was drawn by horses, and fell into bad odor (*sic*) because a wheel of the carriage of a legislator "skidded" on the rails, with disastrous results to the carriage and its occupants. After a year's experience the old horse-trams were abolished, and it was not till 15 years later, in 1879, that the steam trams were introduced. Most people will remember the lumbering "double-deckers" that steamed laboriously about, amid clouds of dust, exhaling dense smoke and soot galore.

But the prejudice against the first type pursued the steam trams. Carriage folk and owners of vehicles generally anathematised them roundly as horse-frightening engines of noise and dirt that would more fittingly find room on the highways of the infernal regions. Especially was there one individual— no less

a personage than a Chief Justice— who invariably sought to intimate his views of the newcomers in a practical and unmistakable way. Until quite recently the law was that vehicles had as much right to the middle of the King's highway as the trams, which, being an eminent lawyer, of course his Honour well knew, and when he happened to be in the vicinity of a tram he often instructed his coachman to drive in front of it, and in this way took a delight in impeding its progress while the whim lasted. But the steam trams had come to stay, and the opposition of the obstructing Chief Justice no more stopped their adoption and growth than did considerations for the fate of the celebrated cow prevent George Stephenson introducing the railway engine.

After a while the top deck disappeared from the steam trams, which, having had a good innings on the roads, are now fast disappearing from view. The last couple of years has witnessed the introduction of the light, fast-moving electric cars. At the present moment there is only one steam service running out of Sydney — that of La Perouse and Botany— but in a few months the Botany part, at least, will undergo conversion, and the other half will soon follow. A sort of "shandy-gaff" system exists on the Rose Bay line, the first half from Sydney being under cable, and the Rose Bay end under electricity. The steam trams which were in use in Sydney are being utilised at Newcastle and on outlying lines such as exist at Enfield, Mortlake, Abbotsford, and Baulkham-hills. As soon, however, as the power is available and the conversions can be effected, every service converging to Circular Quay will be under the propelling influence of the magical current. It will then be one of the best tramway systems in the world.

THE DISTRICTS TRAVERSED CREATION OF NEW SUBURBS INCIDENTS OF AN INTERESTING TOUR

To say that any of the many charming spots that I have had the privilege of visiting during my four days' pilgrimage possesses transcendent beauties and advantages over the others would be an ungraceful thing. It is a matter of individual taste and opinion what may be the "star" suburb along the tramway lines, and it would take a Solomon to award the palm. Moreover, it would be invidious to particularise when there are at least a dozen places at which the traveller may alight and exclaim with the great poet: —
"The breath of Heaven, fresh blowing pure and sweet,
With day-spring born: here leave me to respire."

There is, however, one run which is at present out of the category of suburban lines proper, passing as it does through miles of country in its primeval state— the Long Bay and La Perouse steam line — which I feel I can, without treading on any susceptible corns,

safely recommend as a most exhilarating jaunt, the round trip costing a shilling, some nineteen miles being covered. Passengers get the first glimpse of the rolling ocean at Long Bay on the left, and if at the time the sun is declining from the meridian Botany Bay appears on the other hand — a shimmering lake of burnished silver. It is a sight for the gods.

THE MAGNITUDE OF SYDNEY

A tour such as I have completed is calculated to give a visitor a truer idea of the magnitude of the first capital of Australia than columns of statistics. The houses are, so to speak, as numerous as the sand upon the sea shore, and, significantly enough, the cry is "still they come." Take the Dulwich-hill line, for example, which runs via Newtown, Enmore, and Marrickville. Newtown and Enmore have, of course, been built upon practically years since, but for a couple of miles from the terminus of the Dulwich-hill route new residences; and others in course of erection, are to be seen on all sides.

The line to Abbotsford, through Annandale, Petersham, and Leichhardt, is another instance. The familiar green paddocks of Annandale are fast giving way to bricks and mortar, and one who knew the country between Leichhardt and Abbotsford, on the Parramatta River, a few years ago must be amazed at the transformation scene. On the upper reach of Long Cove, where the eucalypt held undisputed sway, there is now a thriving residential suburb, and sleepy old Five Dock, under the stimulus, of improved communication with the city, is beginning to wear quite a rejuvenated appearance. Abbotsford itself, however, is still in the rural stage. In many places the rails run past the virgin forest, while just out of Five Dock, one meets with broad acres under cultivation.

LAND BOOMING METHOD

The tillage of the soil that is to be seen in this outlying district is reminiscent of what some critics have said in the past of the development of Sydney, namely, that the agricultural and suburban districts were too widely separated, an undesirable fact, which they ascribed to land-booming. Owners of land in outlying parts were withholding it from agriculture, for which it was admirably adapted, they said, in the hope that one fine day a building society agent would happen along and buy it up at a really fictitious value. Such critics have argued that more land under cultivation within fairly easy distance of the city would mean better supplies of vegetables and fruit, and the settlement of a sturdy and prosperous class on the soil a remedy also thus being afforded from congestion of the city — undoubtedly an ever-present danger.

As an illustration of how tram traction may become the handmaid of agriculture the Baulkham-hills line, which branches off the main railway line at Parramatta, may be cited. It goes through one of the best known fruit-raising districts in the State, the fare for passengers being 3d, though before the tram ran it used to cost the residents a shilling in the coach. It likewise used to take an orchardman the best part of a day to cart his fruit to the railway station, but now he simply puts it on the goods tram at his very door. The Baulkham-hills line is being watched closely by advocates for the granting of similar facilities for other producing districts. This by the way.

ADJUNCTS TO THE RAILWAYS

Ashfield and Burwood, I discovered, are benefiting immensely by the steam trams which run from the Ashfield railway station to Enfield, thence to Burwood railway station, and onwards to Mortlake. Shopkeepers and house agents assured me that it has given a great fillip to business there. New houses are springing up along the line, which is seven or eight miles in extent. They say that Enfield for half a century stood still, and is now starting into life again. That it is an ancient suburb I judged by the following epigraph on a church building alongside a quaint little cemetery:— "Adelaide Park Free School Institute, 1847." Free education, and the place sleeping, according to these shopkeepers, for 50 years up to within a little while since. In another respect, too, Enfield is interesting. They apparently keep a kindly eye on the poor people there, one of the front windows of the Council Chambers bearing upon it the words: - "Local Charities Office." Such a place surely deserves a tram service, and a good one, too.

People living on the shores of Kogarah Bay and at Sans Souci and Sandringham declare that they do not know how they could exist there now without the tram, which branches off from the railway station a distance of two and a half miles. Quite a township is visible on the shores of Kogarah Bay, and settlement generally in the country traversed is going ahead. Sans Souci is known to Sydneyites as a delightful pleasure resort.

"SHARKS!"

En passant I may relate a curious phenomenon that came under my notice while the tram was sweeping round on the bend along an upper part of Botany Bay, and my only regret now is, in view of the head-shaking that followed upon the recital of the veracious anecdote about a northern shark, that I did not alight instanter and obtain sworn declarations from a few honest fishers of the sea that I saw about at the time. The phenomenon in question was a flock of domestic geese, which appeared to be in Christmas condition,

swimming about on the briny bosom of the bay. To eyes that had only seen ducks in a pond the spectacle was novel, and it was news to discover that geese are also salt-water birds.

SOME NEW LINES

One of the most invigorating runs out from the Quay is to Drummoyne, the fare being 4d. A swift descent from the heights of Balmain brings one on to the Iron Cove Bridge that spans a pretty strip of water. The journey then lies through Drummoyne, where the houses are of the better kind, and then through Birkenhead, the terminus being on another bridge over the Parramatta River. The new line to Pyrmont just out of the city serves to show what a busy place that has become. The four lines running through the main streets of the metropolis constitute, the much-travelled say, one of the finest systems to be met with in any part of the world, viewed from whatever stand-point.

The trams are doing much for the northern suburbs, and, with the railway there, residents say that the logical conclusion is the long-promised North Shore bridge. The ride from Milson's Point to Willoughby takes one into the forest, and the scent of the wild flowers that one inhales in going there and back lingers with me yet. But the blue gum and the wattle are already being driven backward by the builder's ruthless axe. Mosman, "the newly-married couples' suburb," as it is facetiously termed, is the creation of the tram no less than of the excellent ferry service to its picturesque bay. The overhead wires now reach as far down as The Spit, at Middle Harbour, and fashionable-looking dwellings are being reared on the rocky ledges that are a feature of the place. The Rose Bay line is also assisting to open up the extreme southern foreshores of the harbour. At present, though, it is mainly a tourists' line.

FUTURE OF BOTANY

"Where on earth is Zetland?" has often been asked by the curious, numerous trams with this strange name having of late become very common on the city lines. It is really an estate on the Sydney side of Waterloo, the line running past the church on the top of Mount Carmel, which can be seen so distinctly from the railway carriages entering Redfern. This and the Mitchell-road tram, which joins the Botany and Cook's River lines, disclose the potentialities of the district lying between Redfern and Botany Bay as a manufacturing centre. A prominent feature of the view Botany-wards is the number of high, smoking chimneys of what promises to be a second Birmingham.

EVOLUTION OF THE MOTOR FORTY YEARS AGO AND NOW EXPERIMENTS IN PULLING UP CARS SUDDENLY

When the first electric trams were introduced in Sydney a couple of years ago, a certain physician declared that they would kill half the people with pneumonia. And as certain other disgruntled folk declared that they would run over the other half, the situation seemed parlous, indeed, for the unfortunate population of the city. But both halves of the population are in this year of grace still thriving, and with every evidence of becoming more so.

That the early types of trams running in George-street were more draughty from a hygienic point of view than they should be may be admitted, but very few of them are now running, and the up-to-date car leaves no room for complaint on this score. During my peregrinations I made particular inquiries from those in charge of the trams concerning the amount of sickness and mortality that attended their occupation. I found that one or two drivers had died from pneumonia, which, however, may be attributed not to their having to stand in any draught all day, but more likely to the changes of temperatures to which they are exposed, or merely perhaps to natural susceptibility of constitution.

A CLIMATIC CAR

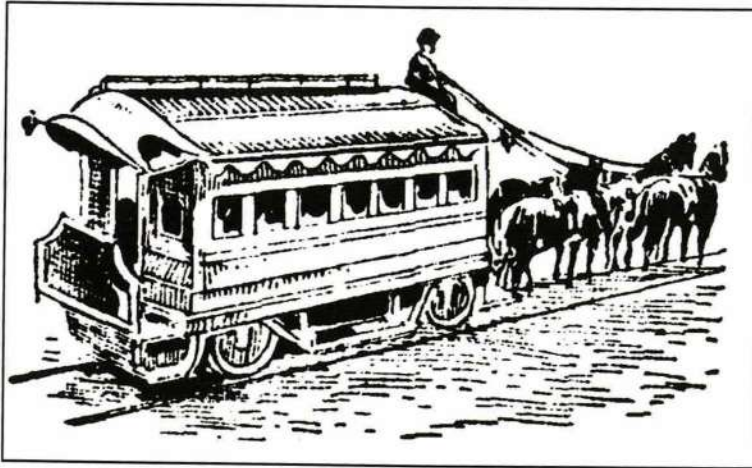
The latest type of electric car which is to be seen running, more particularly on the Bondi, Waverley, and Randwick lines, possesses the advantage of high speed combined with the fact that they are cool in summer and warm in winter. After many experiments it has been decided that these are the trams best suited to a place like Sydney, with its fickle weather of spring, summer, autumn, and winter all in the one day.

The early electric cars belonged to the four-wheel class, but they have been discarded in favour of the eight-wheelers, which are much faster, though it is safe to say that the ordinary traveller can no more tell, apart from the foregoing hint as to the rate of locomotion, what is a four-wheeler and what an eight, than he could say with what figures the fourth hour on the dial of his watch is indicated. It was, I confess, only the other day that I was initiated into a knowledge of the variations in the cars, so far as the number and sizes of the wheels go.

HOW THEY CAN BE PULLED UP

Regarding the question of tram accidents, one naturally asks within what distance can they — the motors — be pulled up? The popular idea appears to be that they can be pulled up within a yard or so

Sydney Horse Tram of 1861.
Daily Telegraph



of any obstacle. That is altogether a misconception. While travelling round on one of the outlying lines, a driver was obliging enough to conduct a few experiments for my special behoof, though he and the conductor never dreamt that I was "a chiel among them takin' notes." We merely happened, in our casual conversation, to drift on to the subject of how the trams could be pulled up in case of an emergency, and as there was no traffic about, the driver consented, in the interests of science, to show me what the emergency stops could do. He tried them singly, and then all together, and the conclusion I came to was that, with a fair current on, and going at an ordinary bat along a level road, the driver that pulls up within the length of the car can compliment himself upon the achievement.

So many factors have to be taken into consideration. First of all, there is the condition of the car. One driver informed me casually — and I give it for what it is worth — that some 20 cars a day are run into the depot for repairs of one kind and another, and if some part of the electrical mechanism happens to be out of gear, it of course prevents to an extent the car being brought to a sudden standstill. Another important element is the state of the rail, rain often making it very slippery, and then there is the grade — all of which varying conditions make it next to impossible to lay down a hard and fast rule as to the distance within which the cars can be pulled up. I noticed that most of the drivers assumed a wry expression when incidentally asked if they could, while going at a fair pace, pull up within five or six yards.

THE BOSS OF THE ROAD

By Act of Parliament, the electric tram-car, and, for that matter, any other species of tram that may be running within the metropolitan area, is boss of the road. The Traffic Act so prescribes, and this is the

only Act of Parliament in existence through which the proverbial coach-and-four cannot be driven, the statute having been specially directed against coaches (of the four-horse variety or otherwise), 'buses, and vehicles generally, which, under the old state of the law giving the trams no greater privileges than they possessed, were often deliberately driven in front of the trams in such a way as to impede their progress. Some drivers of vehicles having abused their privileges to drive where they liked on the King's highway, were shorn of some of them, and to-day any driver who wilfully obstructs a tram is liable to a fine.

WHAT OF THE 'BUSES?

Which all reminds one of the omnibuses that plied so numerously in and about Sydney a few short years ago. Where have they vanished to since the electric trams administered the coup de grace? Well, a visitor to certain inland parts of the State may meet our old friends in all their pristine loveliness there, and it makes him rub his eyes to see if he is properly awake when he sees, a hundred or so miles from the identical spot, the well-known form of conveyance labelled "Surry-hills," or something like that.

But they say that some of the old Sydney 'buses are wreaking a terrible vengeance on their natural enemies, the trams, down Melbourne way. In the southern capital, where the country is mostly level, they have the cable service, and they have no penny sections. Until quite recently a ride of a hundred yards over any of the Melbourne lines cost a passenger 3d, any distance on the route costing that. The ex-Sydney 'buses, however, entered into competition with the cable cars, and on some of the routes so cut into the passenger traffic that the tram fares have been reduced to 2d. The Melbournites say that the 'buses on several of the lines can give the trams a start and a beating. Good old Jehu. How often in the old days, in this

self-same way, has he piloted us home for 1 o'clock luncheon, and behind his galloping team, literally flown in the face of the traffic authorities that were!

THE MEN WHO RUN THEM
SOME QUEER REGULATIONS
HOW THE EIGHT-HOUR SYSTEM IS WORKING

What subtle charm is it that attracts the female heart towards the man in uniform? Be he son of Mars or Neptune, postman, railway porter, or tram conductor, it is all the same — feminine smiles are especially for him. Having been a good deal lately in an atmosphere of tramway silver buttons and braided caps, I can solemnly affirm the affinity that exists 'twixt the fair daughters of Eve and the uniform. Full many a coy glance from wayside, wayward nymph have I seen directed towards the driver at the wheel and at the agile young fellow climbing sailor-like round his tram in search of the modest pennies of passengers.

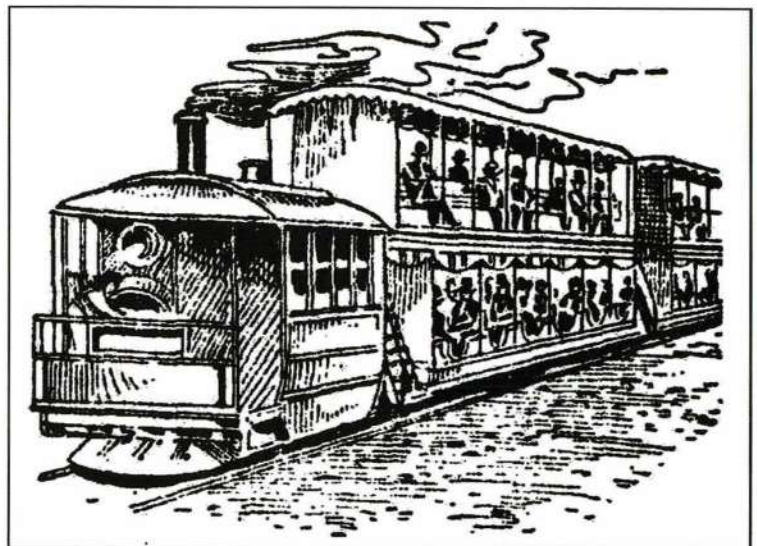
And the application of all this is that danger lurks in these bright eyes for those who are engaged in the responsible duty of safely piloting you and me to our destination. I recall a couple of cases which occupied the attention of the courts not long since, where damages were claimed for alleged negligence in connection with tram accidents, and where, the case for the claimant was that fair passengers had for the nonce taken the attention of the driver from his work. And in both instances the jury properly expressed their disapprobation of such levity by awarding substantial damages.

PITY THE POOR CONDUCTOR

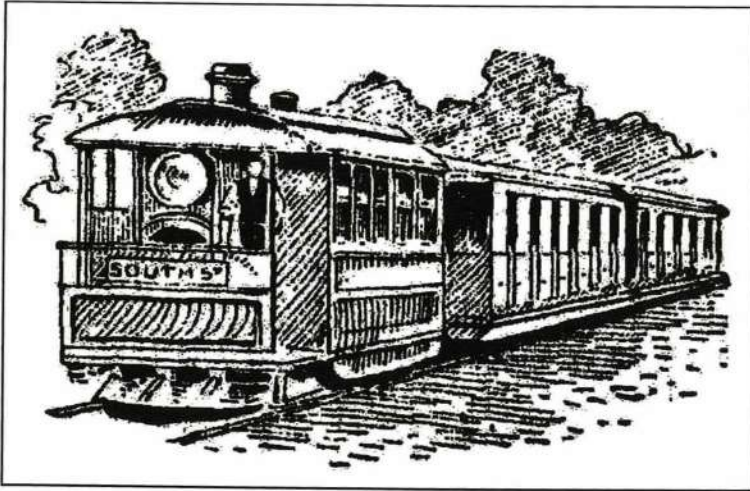
There are other troubles, not so fair in their outward guise that beset the tram conductor. Did you never note fidgety indications on the part of the poor fellow when an inspector chances to board the car and scrutinise the tickets? The passenger, who may be up to his neck in the day's news, blesses the newcomer and his brusquerie, but the chances are that the conductor is on pins and needles. Why? Not because everything is not morally all right in connection with the ticket-book, but because the least irregularity from a departmental point of view means a report and being called "upstairs" — an ominous word for the men on the trams.

By a pure accident one day a conductor gave me the wrong ticket, and he told me, on it being pointed out to him, that he could not put the wrong ticket back in the book and give it to the first passenger that wanted it, and that the mistake would involve his reporting the matter. For all the department could know, the ticket so wrongly torn out and replaced might have been one previously sold and picked up again by a fraudulent guard, and the elaborate precautions against fraud on his part hedge the conductor round with regulations, some of which appear to an outsider rather severe, and capable of modification. Then, again, should the inspector find a passenger riding on a section beyond which his ticket entitles him to, the conductor has subsequently to explain the why and the wherefore.

This strictness reacts prejudicially upon the passenger. As he dare not make too many mistakes for the sake of his reputation at headquarters, the conductor in some instances almost worries the life out of passengers, who obey the request "Show tickets, please," till they



An obsolete "double decker" of 1879. Daily Telegraph



The present improved steam type.
Daily Telegraph

begin to feel quite tired. Said a fellow-passenger to me one day, by way of comment, after the guard had been round about the third time in as many minutes, "These conductors would make but poor detectives. There are only three of us at this end of the car, and yet he cannot bear in mind what tickets we got from him." "They would make worse waiters, who remember a dozen orders at once," chimed in the third passenger. A knowledge, however, of what the luckless conductor may expect "upstairs" at odd moments inclines one to more cheerfully submit to the "show tickets" nuisance so many times in the one journey. To get at the one dishonest passenger the department subjects the 999 honest ones to a deal of inconvenience.

EYESIGHT DIFFICULTIES

There are other service regulations which are not standing the test of experience. For instance, I was sitting on a car next to the driver one very windy day, and found that, owing to the dust and grit that was being blown about, it was all I could do to keep my eyes open. The dust was rolling right into our faces, in dense clouds. Knowing how serviceable dust-goggles are to drivers of vehicles under similar conditions, I asked the man at the steering-gear why he did not protect his eyes in that way. "Regulations won't allow it, sir," was the answer.

Inquiries as to why there should be a regulation made against it, the driver confessed that he did not quite know, but he thought it was because of a belief at headquarters that, though a driver might with goggles be able to see well enough straight ahead, his vision at the side and rear of him would not be so good. I found that my vision in a cloud of dust was neither good for looking forwards, sideways, or backwards, and the driver could have been in no better condition. The same day a conductor informed me that after such

dusty weather he actually experienced difficulty in sleeping at night, and the following morning his eyes ached owing to the amount of foreign substance in them.

Judging from the severe test which is periodically applied to drivers and conductors, they need to have very good eyesight to pass it, but one driver complained to me that, owing to the strain imposed upon their eyes through not being able to wear dust-goggles, not one of them would pass it five years hence. Watering the streets with salt water, he said, made it all the worse for them when the saline particles of sand and dirt got into their optics. The embargo on goggles, I confess, puzzled me much.

ABOUT THE TICKETS

A conductor on a Leichhardt tram told me that he thought a car on that line earned about £10 a day for the Government. His "book" of tickets represented £12, for which he was responsible. When his cash was counted at the office, if he was short his wages were docked to the extent. If there was a surplus, of course, he did not get it, as that would clearly be too great a temptation to over-charge.

To do them justice, the men on the trams do not air many grievances, and appreciate the granting of the eight-hour concession, though what are known as "broken shifts" may spread their duties in some cases over the whole day. The position of driver or conductor is anything but a sinecure, and they must keep on the alert the whole of the while to avoid accidents, which in the great majority of cases are the result of carelessness on one side or the other. Newsboys boarding trams in motion, one driver told me, were the bane of his existence. Moreover, collecting £5 or £6 worth of fares a day and seeing that all is safe before

the tram starts is not child's play.

From casual inquiries I elicited that comparatively few of the drivers of the old steam engines pilot, the electric cars about, the great majority having been taken into the railway service. Others still drive the steam trams, which are in use in outlying suburbs on spur lines, but you will soon be able to count these on the fingers of one hand.

SCENES ALONG THE ROUTE BLACKS' CAMP AND THE BLOCK-HOLDERS' SETTLEMENT

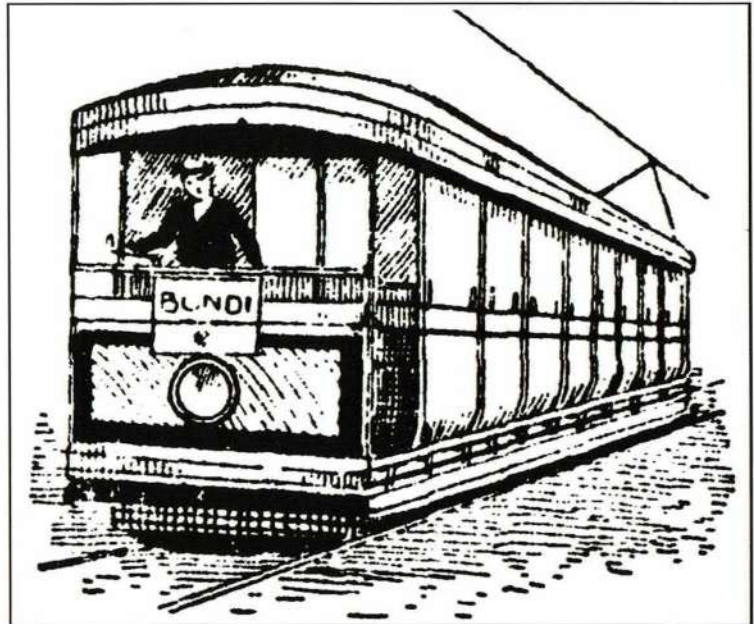
At La Perouse Camp I was granted an audience with His Majesty King Billy, the rightful head of the tribe that once held dominion over the stretch of country that we now call the county of Cumberland. Attired in a silk hat that had seen better days and an old suit of fashionable cut that had clearly not been made for him. King Billy looked quite the native monarch — certainly as we know him in these latter degenerate days. I recognised in him a somewhat familiar figure about the city streets. It appears that the aborigines still enjoy, with legislators and distinguished visitors, the privilege of travelling over all the tramways free, a privilege which they exercise mostly on the La Perouse line.

A visit to the camp is well worth the trouble entailed in getting there, and one finds everything in a cleanly and orderly condition. It is said that the full-blooded black themselves will not work much, but the half-castes are industrious, some of them earning a good livelihood

by fishing in Botany Bay with nets, many being able to afford as much as £50 for a boat for the purpose when occasion demands. There is one inmate of the camp, a crippled aborigine, who carves beautifully on wood. On the run out to La Perouse a gin and several olive-branches were waiting at a stopping-place to be carried on to the camp, but at the last moment one of the latter was observed to have strayed some little distance away. The shrill maternal voice hailed him as follows: "Now then, Ginger, hurry up."

"DEBIL-DEBIL."

On the La Perouse line I met a gentleman one of whose experiences with black-fellows is worth recording. He told me that he was once on a station in New South Wales where there was a black stockman who had been on the place for nearly twenty years. One day my tram-car friend happened to be away some distance from the station, walking with a black-fellow. He did not notice any particular change in the manner of his ebony companion towards him, but on his return the aborigine made him realise that in walking before him in the bush as he had, most of the way, he had run great risk. Said the black-fellow: "Boss ought not to walk in front of black-fellow. When me see you not looking me have great fight with the debil-debil in me. Debil-debil want me to kill you." "Never after that," said the gentleman, "did I give a black-fellow a chance to walk behind me in a lonely spot. The savage is innate with them, and you cannot trust them."



The latest electric car now in use.
Daily Telegraph

“CRICKVILLE.”

It is apparent to passengers on the Long Bay line that the blockholders' settlement at “Crickville” is making slow progress. Only some half-dozen small tenements are as yet to be seen. The country at the spot is not good enough to feed a bandicoot upon, and I saw no evidences of vegetable-growing about the little holdings such as it was promised in Parliament that people would witness there.

Along this line also is being erected the big female penitentiary, which the residents of Randwick so much objected to having placed within the bounds of their suburb.

On the run back to Sydney the tram runs past the new cemetery, in which are the headstones and remains which were removed from the old Devonshire-street Cemetery.

The La Perouse-Botany run is also noteworthy from the fact that one sees the old swamps from which Sydney used to derive its water supply, there being a chain of fifteen ponds stretching across from Botany towards the coast. Speaking to a fellow-passenger of Botany and the marvellous escape it had from being the very first Australian capital, my companion expressed the opinion that it would yet become a most important place. Though now, he said, the full force of the ocean swept into the bay, in one hundred years it would have to be improved and used for harbour purposes, as the place was so adjacent to Sydney, and a second harbour there would become indispensable.

HOLIDAY RESORTS

Australians dearly love a holiday, it is truly said, and what wonder with the number of delightful resorts that are available for picnicking purposes! They abound

along the new tram lines. I learnt from the conductor that the La Perouse run is becoming a favourite one for excursionists, and the swift and ample service to such places as Coogee, Bronte, and Bondi take bigger crowds than ever to those health-giving beaches. Under the influence of improved tramway facilities Cook's River is regaining the popularity which it some time ago lost owing to the laxity on the part of those whose duty it was to keep this fine fresh water stream free from contamination. The part of the river near the railway bridge is being deepened and beautified, and the river will yet again be the favourite resort of boating parties.

Abbotsford, on the Leichhardt route, attracts many holiday-makers. Rose Bay, with its beautiful sweep of white beach, never fails on a holiday to draw its quota of festive pilgrims. The tram right up to Willoughby has made it a resort for picnic parties, and the same may be said of “The Spit” and Balmoral Beach, on the Mosman line.

SWIMMING BATHS

Swimming, which is so beneficial in a climate like ours, can be indulged in at quite a number of spots served by the trams, without danger from sharks. Within varying distance of the General Post Office there are over a dozen well-regulated baths, where a dip in the briny may be enjoyed. The best ocean baths are at Bondi and Bronte. One gets a grand bogey at Lady Robinson's Beach, and nearer Port Jackson the purest water will be found at Rushcutter Bay, at Balmoral, and at “The Spit.” There is little doubt that with the extension of the area now served by the trams more baths still will be erected in the different waterside suburbs. Baths to cost £10,000 are in course of erection in Woolloomooloo Bay, and will be the finest in the southern hemisphere. They would scarcely be complete without a tramway thither.



Brand new N class cars at Ritchie Bros works in 1902. The second car is 408.

State Library of NSW

Originally published in the *Daily Telegraph*, Wednesday 21 January 1903, page 8.

A NIGHT ON THE TRAMWAY

(By our Special Commissioner.)

THE AFTER TWELVE SERVICE QUAINT EXPERIENCES IN THE SMALL HOURS

The all-night service of trams is undoubtedly a great and much-appreciated boon, there being an hourly series of trams to and from the suburbs. The trams are patronised by those whose business necessitates to an extent their making night day, and by many who use them for getting to the Belmore and Woolloomooloo markets early.

Of course, there are what the tram officials term "pick-up". A "pick-up" in a cricket or football team is an individual whose services are enlisted at the last moment, but in tramway parlance he is a chance passenger. Sometimes, it is true, the midnight "pick-up" may be in need of a "pick-me-up." After all, though in a different sense to the popular one, that is what the trams do for the poor fellow.

"Are there regular 'pick-ups'?" it may be asked. Heaven forbid! Though such practices are strictly irregular, yet from the point of view of the tramway conductor they are fairly regular. Still it is not the same fellow every time. The ordinary passengers on the list, and those who really couldn't help it — "didn't really notice how the deuced time was going, my dear" — do not look particularly askance if there should happen to be one or two in the tram just after 12 who give the paternal conductor no end of trouble to coax a fare out of them, together with some highly essential information as to where they live.

SOME QUEER PASSENGERS

It is only now and again that any of the "pick-ups" give trouble. In most cases they have sufficient nous left to know that home is the best place for them, and, sinking their chins on their shirt-front, they slumber peacefully, and leave their fate in the hands of the conductor, dimly conscious of the fact that when [their] street is reached they will be roused to pedestrian activity. But, fortunately, this type of passenger is rarer than one would suppose under the circumstances. As a general rule, the "pick-ups" are more hilarious than helpless. An amusing instance recently occurred on one run after the clock had struck two. It was a holiday occasion, and there was a heterogeneous collection of humanity on the car, from the swell in kid gloves to the out-of-elbow citizen. Several choice spirits held an impromptu concert, their efforts at harmony, however, being much

disturbed, by one of their own party, who went so far as to annoy passengers with his conduct. Without waiting for the guard to perform the kind office for the passengers generally, the members of the party themselves, at the first convenient stopping-place, deposited the noisy one into the King's highway — "this side up with care." He like a soldier fell, and on the return journey the conductor saw him lying there still.

BUT LITTLE DRUNKENNESS

I have not seen anything on the all-night trams in the shape of inebriety that could be taken serious objection to from the point of view of the travelling public, and in the four days' experience of the lines I only saw one man riding on the tram who was not quite right; but even he was sober enough to get out himself at the right place.

This incident recalled a letter which a few weeks ago I read in "The Daily Telegraph," complaining of the department allowing men under the influence of drink to travel on the trams. The correspondent said that it was disgusting to permit drunken people to be a source of annoyance to other passengers. I asked a conductor what he usually did in such cases, he replied that in the first case he did not get many passengers who could not take care of themselves, but when he did he never handed them over to the police authorities unless they interfered with other passengers. To see only one half-tipsy man in a run over all the lines about Sydney during the day-time, and not an obstreperous one on four all-night trams even, is surely some evidence that our correspondent in the journey of which he complained was peculiarly unfortunate in this regard.

NO SUNDAY-MORNING TRAMS

They do not run the all-night trams after 12 o'clock on Saturdays, this being a matter for some surprise to the public. Saturday night, after 12 — or, more correctly speaking, Sunday morning—is just the very time that the late trams would be patronised, some people say. The argument against that is that the trams are mainly run at these late hours in the interests of those whose inevitable business duties keep them up late, and as these do not work late on Saturday evening, there is no necessity for the trams. Moreover, the policy of the department is to work their staff as little as possible on the Sunday.

It should be mentioned that the commissioners do not pretend to run trams on all the lines after midnight. All they do is to run them on what may be called the trunk lines, which are considered handy to the great majority of suburban residents. For the western suburbs there is an hourly service to Leichardt. Dulwich-hill, Balmain; and to serve the convenience of people in the southern and eastern suburbs cars run once an hour to Cleveland-street and Bondi Junction. Those who happen to live beyond these terminal points have to bestride Shank's pony for the rest of the homeward journey.

DOUBLE FARES

The number of persons who use the night trams have justified the existence of the system.

The trips from the city are most patronised two or three hours after midnight, but towards morning the greater numbers are carried citywards. Tramway employees are allowed to ride to and from their place of residence free, and to many of these the late service is a great boon, saving them a long walk home after the fatigues of their evening shift. A tram official must be wearing his cap unless he wishes to pay like an ordinary citizen, who on all these night runs is charged twice as much as over the same distance during the day.

A MIDNIGHT ADVENTURE

From an adventure a conductor related to me it would seem that they have to take all sorts of precautions for the security of their cash-laden bags. Until lately they could not "pay in" after a certain hour, and the result was that they had to take what fares they had collected home, and account for them in the morning. One night, as he was homeward bound, he had £6 or £7 in his bag, and noticed that two, suspicious-looking individuals, who were shadowing him, as the sequel proved, alighted from the late tram at the same spot as he got out.

His journey thence was a lonely one across Moore Park, the tram having conveyed him as far as Cleveland-street, near the Zoo. The two men walked in the same direction, and presently one asked him what was the time — a favourite question with the gentle garrotter and footpad. The conductor knew then for certain that they boded him no good, and cut them short, flashing a small revolver in the air, telling them that if they did not clear off he would shoot. They both doubled off ahead of him, apparently intimidated at the sight of the revolver; but that was by no means the last he saw of them.

In the meantime they had probably held a council of war, and had come to the conclusion that it might not have been a revolver after all that the conductor had flourished in their faces.

Or, may be, they, too, were similarly armed. That, at any rate, is how the guard figured it out in his own mind afterwards. At all events, when he got as far as Kippax Lake, in the middle of the park, he found what he took to be the same men approaching him, one on either side of the water. When they got close enough, he saw that they were the same pair. They called out to him that if he threw down his bag they would not hurt him, but otherwise they --.

Out came the little six-shooter again, and the men recoiled a pace or two.

A TACTICAL MOVE

Then the conductor showed them a point. He had seen youngsters, in pursuit of their model yachts, walking about in the lake, and he knew it was not too deep. He, without a second's hesitation, dashed into the water as he saw the two recovering from the shock which the sight of the revolver caused them, and before they suspected his little game he had walked right into the centre of the lagoon, a distance of some 40yds. He there waited to see what they would do next. He intended, as a last resort only, to fire. He fortunately found that the lake was at a low ebb, and that the water was not up to his waist. He did not know whether his assailants were armed or not, and till it became absolutely necessary to preserve his own life he did not want to fire at them.

This strange tactic on his part fairly nonplussed the footpads, who, after gazing at him some little while in blank astonishment as he stood at bay in the middle of the pond, vanished.



A C class with T trailer 97 in Pitt Street c1902.

David Critchley colln

This article was originally published in the *Electric Railway Journal*, Vol.38 No.1 for July 1, 1911.

STANDARD CAR OF THE NEW SOUTH WALES GOVERNMENT TRAMWAYS

This Type of Car Combines Large Seating Capacity with Exceptionally Light Weight.
The Body Is Framed Separately from the Structural Steel Underframe
and Is Bolted Down on the Underframe.

The New South Wales Government Railways & Tramways has in service in Sydney 195 double-truck cars of an interesting design which has been adopted as standard by the tramways department. They are of the combination open and closed type and seat eighty passengers in sixteen cross seats arranged back to back. The inclosed [sic] section of the car body, which is 19 ft. long, contains eight cross seats and is entered from the running boards through four double sliding doors in each side. The open sections at each end are inclosed by canvas curtains which are stiffened with galvanized iron strips sliding in grooves in the posts. Glass-inclosed motormen's vestibules are provided at each end of the cars. These vestibules are narrower than the car body, and are tapered to allow proper clearance between two cars passing on a curve of 66-ft. radius with tracks on 12-ft centres.

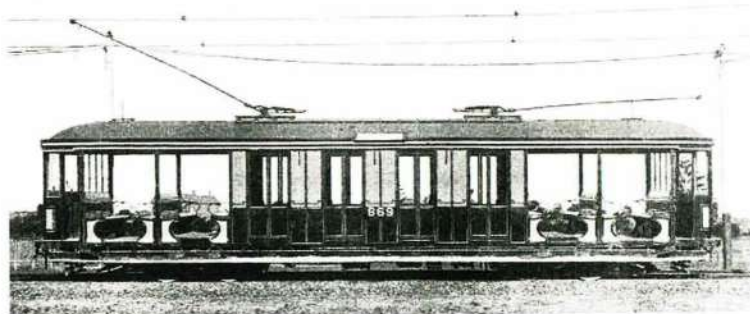
The car body is built separately from the steel underframe, and is bolted down on the top flanges of the side sills. The two principal members of the underframe are the latticed girder side sills. These are built up of two 3-in. x 3-in. x $\frac{3}{8}$ -in. angles and 1 $\frac{1}{2}$ -in. x $\frac{5}{8}$ -in. lattices. Each piece of lattice is continuous for four or five panels in order to reduce the number of rivets in the top member, so as not to interfere with the bolts used for attaching the car body. The girders are stiffened at the bolsters with a $\frac{3}{4}$ -in. flat plate, 8 ft. long, riveted to the top member, and an angle 3 in. x 3 in. x $\frac{3}{8}$ in. x 10 ft. long, riveted to the bottom member.

The body bolsters are built up of two 1-in. x 6-in. plates. The top plate is bent down inside of the top angles of

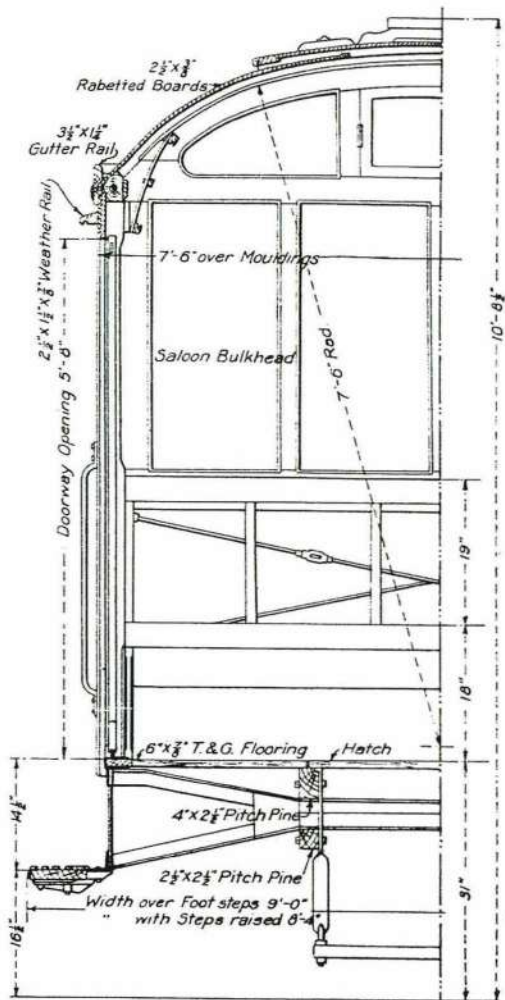
the side sills. Six angle iron transoms connect the two side sills and support the central longitudinal filling pieces on which the car body rests. On each side of the bolsters light T-irons are riveted across between the side sills to support the ends of two similar longitudinal members which rest on top of the bolster and carry the motor trap doors in the car floor. The end sills are 3-in. x 3-in. x $\frac{3}{8}$ -in. angles, bent around the corners and riveted to the bottom angles of the side sills.

The platform underframing consists of two 4-in., 7-lb. channels, bolted under the gusset plates of the transom nearest the end sill and resting on top of the end sill. These channels support the 5-in. x 3-in. angle-iron bumper. The platform floor is supported in the centre by two wooden sills, 4 in. x 2 $\frac{1}{2}$ in., which rest on the body end sill but are not bolted or otherwise fastened to the body flooring. This platform construction was employed in order to minimise the damage to the car body and underframing in the event of collisions, and it has proved entirely successful, for in three severe collisions the platforms have been the only parts damaged in either car.

The steel underframe weighs only 340 lb., but it is very rigid. Assuming a maximum load of 160 passengers, the uniformly distributed load on each sill is 33 lb. per inch of length. The diagram on page 18 shows the deflection of a complete underframe under a test load of 82,000 lb., which is equivalent to 72.5 lb. per inch per sill. With this load the maximum deflection at the centre of the car was $\frac{1}{4}$ in., and the two side sills showed approximately uniform bending at all points. In riveting



Side view of O class car 869 on Gregory Sidings, Moore Park.



New South Wales Car—Half Cross Section



End view of O car 869 on Gregory Sidings, Moore Park

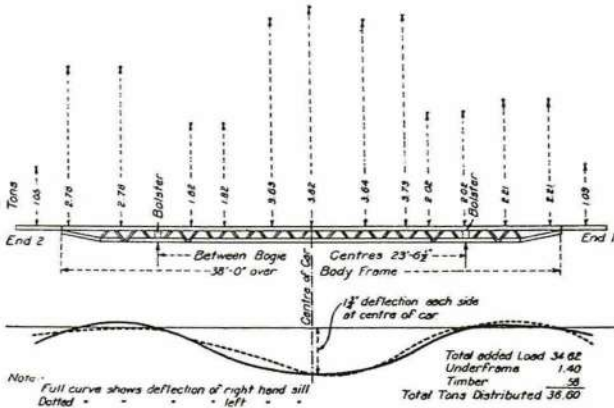
up the latticed girders they are given a camber of 1/4 in. at the ends and 3/16 in. in the centre.

The car body is built almost entirely of wood, and is a separate structure from the steel underframe to which it is bolted. It has an arched roof, the interesting feature of which is the gutter, which is continuous around the eaves. The water which collects in this gutter is carried down to the roadbed through a 1 1/2-in. iron pipe, which forms one of the end stanchions for the motorman's vestibule. The seats in both the open and closed sections of the car are made of hardwood slats. The floor of the car is only 31 in. above the rails, except in the two compartments immediately over the body bolsters, where it is raised to 34 in. The two seats in

each of these compartments are raised 2 in. higher than the other seats to offset the rise in the car floor. Pressed steel seat end frames weighing 9 3/4 lb. each are used on the open compartment seats.

Of the 195 cars in service 144 are equipped with General Electric Type M multiple-unit control and the remaining fifty-one cars have K-6 platform controllers. Four interpole motors of 30 hp each are applied on 174 of the cars, and the other twenty-five cars have motors of the same size without interpoles. The interpole motors were furnished by Dick, Kerr & Company, Ltd., and the motors without interpoles by the General Electric Company. One hundred and thirty additional cars of the same type are now being built. They will be equipped with 30-hp motors without interpoles and multiple-unit control.

The cars are fitted with Allis-Chalmers air brakes and Sterling geared hand brakes. The air and hand brakes are connected to the truck brake rigging independently; that is, the air brake rods are connected to the two inside truck brake levers and the hand brake rods are connected to the outside truck brake levers. When the air brake is applied the truck brake levers to which the hand brakes are attached act as dead levers, and their upper ends bear against the truck transoms. The wheels



New South Wales Car—Deflection Test of Underframe

cannot be locked by the cumulative pressure of both air and hand brakes, nor can the breaking of any one part cause the entire braking power to be lost. The ratio of the foundation brake gear is 11½ to 1, and while this is slightly higher than is generally considered good practice the gear has been used satisfactorily for more than three years. The gear hand brake multiplies the pressure on the brake handle 14.9 times, so that with 100-lb. pressure on the handle the total braking force at the shoes is 34,270 lb. With the air brake and 70-lb. cylinder pressure a total braking force of 31,740 lb. is obtained.

TRUCKS

The trucks used under these cars are a modified design of the diamond arch bar type with swinging bolster. The bolster is supported at each end by a double coil spring instead of the usual elliptical spring, and the load on the side frames is transmitted to the journal boxes through two small coil springs supported on a yoke which straddles the journal box. The axle journals are only 3½ in. x 3¾ in. The trucks, as well as the car bodies, were built by the Meadowbank Manufacturing Company, Sydney, New South Wales.

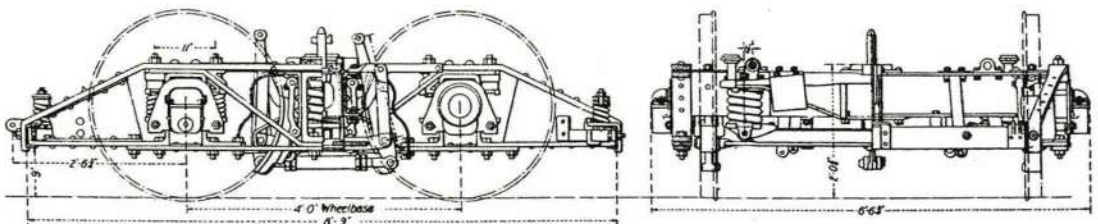
WEIGHT

The following table gives the detail weights of one car with interpole motors and multiple-unit control:

	Pounds
Car body, including running boards.....	7,503
Underframe, including drawbar.....	4,798
Motors, gears and gear cases.....	9,824
Control, conduit, trolley bases, etc.....	3,028
Brakes.....	1,153
Trucks.....	4,852
Wheels and axles.....	5,104
Miscellaneous, including headlights, etc.....	649

This is equivalent to 461 lb. per seat, 812 lb. per foot of length and 108 lb. per square foot of floor area. The cars with- K-6 control and motors without interpoles weigh only 33,851 lb., which is equivalent to 423 lb. per seat, 743 lb. per foot of length and 99 lb. per square foot of floor area.

The New South Wales Government Railways & Tramways are managed by a commission of three members headed by T. R. Johnson. The chief officers of the tramway department are J. Kneeshaw, traffic superintendent, who has supervision over the conductors and motormen; G. R. Coudrey, tramway engineer, who is in charge of buildings and track, and O. W. Brain, electrical engineer, who is in charge of power generation and distribution, and the construction and maintenance of the rolling stock. The new standard cars were designed in the office of Mr. Brain.



New South Wales Car—Motor Truck

Originally published in *The Sunday Sun*, 29 November 1903, page 5.

A FLYING TRIP

Doing the Sydney Trams 100 MILES IN 15 HOURS.

(FOR THE "SUN.")

Having heard the question discussed a good many times as to whether it was possible to travel round the tramway system of Sydney in a day, I determined to try whether it could be done or not.

Calling on Mr. Kneeshaw, the Tramway Superintendent, and expressing my intention, he afforded me every assistance in the way of a programme giving the times at different Junctions, &c., and showing the best and quickest method of getting over the lines.

It was a pretty big -task, as it meant, if I could keep to the various times, continuous travelling in the cars for over 16 hours.

Commencing at King-street city, at 6.45 a.m., I jumped into the La. Perouse steam tram and started the journey.

Up Oxford-street and out by Kensington racecourse brought us through the lovely green hills and paddocks of that suburb.

Long stretches of meadow, covered with fine luxuriant grasses, now met the eye. The greenness of the fields being relieved occasionally by stretches of russet-red where the grass seed was ripening gave it a pleasing aspect. What a beautiful fat harvest of grass hay was lying here ungarnered!

Do you know where the village of Rainbow Loop is? I suppose not.

Well, as the tram spins round a curve a sign on a post denotes it is "Rainbow Loop," and 15 or 20 humpies, or small houses, built of kerosene tins, old bags, old iron, &c., on Government ground, constitute the little village where the landlord troubleth not, and the tax-gatherer hath no honour.

The route here was extremely picturesque, and the wind was blowing at hurricane force as, rounding a curve, the wild waves and breakers or Long Bay burst

into view like a charging troop of cavalry with foam-white horses and blue uniforms.

The new gaol, almost finished, at the same spot brought to mind irresistibly the Count of Monte Cristo and the fortress where he was imprisoned by the wild waves of France.

Further on is Little Bay, where from the elevation the Blue Mountains can be seen.

The rugged nature of the country, the waving trees and scrub, interspersed with wild bloom, the mountains merged in the amethyst distance, and the open, breaking sea on the left, formed a magnificent panoramic view that few people are aware of.

Further on La Perouse forms another striking scene.

On one hand, the mighty Pacific Ocean foaming and rearing under the force of the gale, and the dreaded Bombora rising like an angry demon of the deep. On the other hand, the calmer waters of Botany Bay, where a timid ship was sheltering.

This portion of the round trip amply repaid the trouble of the rest.

What a run first thing in the morning this for gloomy dyspeptics. No need for Doolan Digestive Dots then!

On to Botany. Catch the electric car to Waterloo, through historic ground connected with the names of Cook, Banks, La Perouse, and others.

Past the dams where old Sydney obtained her water supply.

See a group of unemployed breaking atones. What a misnomer! Breaking stones is one of the fullest employments I can think of, and one of the hardest.

Catch the Alexandra tram. Junction with St. Peters,

run to Cook's River. back again, from Newtown Bridge to Dulwich Hill, back again, thence to City-road junction, Glebe Point and back, to Abbotsford, and the water's edge through Leichhardt and Five Dock, fields covered with ripening grasses, dandelions and clover; back to junction, thence to Balmain and Drummoyne, and the water's edge once more.

Back to Balmain extension—curious counter-balance affair acting as a brake on the line here, which the car pushes ahead down a steep hill to the ferry. Jump on the steamer, get out at Erskine-street, rush up to King-street. catch the Ocean-street cable tram. Just up to time; everything working like a clock, 2.27 p.m. now—eight hours travelling.

From Ocean-street to Watson's Bay, lovely harbour views: pass South Head lighthouse, see old church for sale; the open sea once more; raining and blowing.

Back to King-street, to Bondi—the open sea, hurrah! Back to Waverley Junction, to Coogee—the open, open sea again.

Getting late, 5.4t p.m. To Cleveland-street junction, thence to Circular Quay—6.40 p.m.

Getting tired: long way yet to go. Jump on Mosman steamer, get electric tram. junction for Spit; Spit and back again. Ridge-street Junction; Gore Hill and back again, do Willoughby and return. Dark, stormy night. Journey nearly done, to Milson's Point, ferry to Circular Quay, 9.21 p.m. Eureka!

The official programme worked like machinery. not a single hitch all day.

I had often to jump from one moving tram to another to keep the connections intact; one miss and I would have failed.

I must candidly admit that the whole system reflects the greatest credit on the whole staff, from the lowest grade to the highest.

The fact that I could travel round the vast system without a hitch or breakdown proves this conclusively.

A singular circumstance was that during the whole of the tour I never met a single ticket examiner.

The distance I travelled was approximately 100 miles; time. of journey about 15 hours.

As showing what this great state asset is capable of doing—the trams last year carried 130,406.402 passengers. There are 1200 conductors employed, 900 drivers, and a total staff of about 4000.

My thanks are due to Mr. Superintendent Kneeshaw, and his capable officers, for the assistance afforded, as without the programme compiled by them the journey would have been impossible.

Published in the *Daily Telegraph* (Sydney), Friday 24 April 1903, page 4.

GOODS TRAMS

The Railway Commissioners decline to discuss seriously the Randwick Council's proposal to utilise the tramway system for the delivery of goods. In the first place, they point out, the trams are not fitted for this kind of business, and during the day it would be quite impossible, without seriously inconveniencing the public, to attempt to carry other than passengers. It is the experience of all large city services that it does not pay to handle goods for short distances. To start with, it would be necessary to establish a receiving depot in Sydney, where the trucks could stand, and this would be an almost insuperable difficulty. Then, again, at various points along

the lines delivery depots would be required. This would involve four separate handlings; the goods must first be delivered at the receiving depot, then loaded on the trucks, subsequently, after a short journey, discharged at the delivery depot, and finally reloaded into carts. Therefore in all short distance business it becomes cheaper to cart direct, and save three handlings. The Randwick Council suggested that the work might be done at night. As to this, the Commissioners point out that night work is never done so satisfactorily as in day time; while employees must be paid extra wages for it.

HERE AND THERE

AUSTRALIAN AND OVERSEAS NEWS

Newcastle

Two of Newcastle's LRVs are now in all-over advertising liveries since 5 April. They are 2152 in Newcastle Permanent livery and 2153 in a livery for the University of Newcastle. Newcastle's last tram, 2156 has been delivered and is undergoing testing.

Sydney testing

Daylight testing of the Sydney LRVs officially commenced on the CBD and SE light rail project at 10:00am on 11 April. Coupled LRV cars 003 and 004 were the first to be test run in daylight. The occasion was a relatively quiet affair greeted by three photographers and a small contingent of construction crew and the ubiquitous 'authorised traffic controllers'. See photo on back page.

Canberra's light rail line opens

Canberra's first light rail or tram line, from Civic north to Gungahlin, was officially opened on 18 April 2019. Public operations began with a 'community launch' on 20-21 April.

Readers are referred to previous news items about the line in *Trolley Wire*, particularly those in the November 2017 and August 2018 issues. The former report included a diagrammatic route map.

The run-up to opening

Following a start in June 2018, test running was initially carried out on the northern section of the line, from the depot at Mitchell to Gungahlin; and progressively extended south to the terminus at Civic. It was announced late in 2018 that the line's opening, planned to occur by the end of the year, would be delayed until early 2019. A principal reason was the need for the system to receive the approval of regulators including the Office of the National Rail Safety Regulator. In the event, clearance from regulators was achieved only days before opening.

In the early months of 2019, most visible activity appeared to be focused on the completion of stops and landscaping. Remarkably, a short section of track had to be relaid when it was found to be out of gauge; and

Newcastle LRV 2153 in a livery for University of Newcastle in Scott Street approaching the Newcastle Beach terminus on 11 April. Peter Gambling



Newcastle LRV 2152 in all-over advertising livery for Newcastle Permanent at the Newcastle Beach (Pacific Park) terminus on 5 April. Peter Gambling



It's 7.55am on Easter Saturday, 20 April, with only five minutes to go before normal services begin on Canberra's light rail line. At the Alinga Street terminus in Civic are trams 009 at left and 007 at right. No. 009 was the first service tram of the day. Randall Wilson

only a few days before opening there was further work to relay a short section of rail to rectify a drainage issue.

Meanwhile the intensity of test or training operations continued to increase. In the weeks before opening trams could be seen running what appeared to be a frequent shadow service along the full length of the line, showing normal destinations rather than 'not in service'.

The first citizens to travel on the new line were a selected group of people with disabilities – sight, hearing or mobility impairment – who were invited on a special run on 6 March to assess how the service would meet their needs. The car carrying the group ran from Gungahlin to Nullarbor Avenue and return,

reversing on the crossover at that location. A second similar trip was run shortly before the line opened.

The official opening – 18 April

Canberra residents were invited to take part in a ballot for a preview ride on Thursday 18 April. Almost 6,000 entries were received, from which 150 names were selected to receive double passes.

At noon on 18 April car 011 left the Civic terminus at Alinga Street carrying ballot winners, students and charity guests. Other cars in the "Community Preview Loop" started their round trips from various stops.

Car 014 arrived at Civic from Gungahlin carrying ACT political leaders at 12.30pm. The Chief Minister,



Impeccably clean on the first day of regular services, car 013 departs the Alinga Street terminus on one of many very well patronised runs to Gungahlin. Randall Wilson

Andrew Barr and the Transport Minister, Meegan Fitzharris then unveiled a plaque recording the official opening of the line.

The first public days – 20 and 21 April

Public services began on the weekend of 20 and 21 April. At 8.00 am on the Saturday morning, car 009 left Alinga Street with the first northbound trip. It was lightly loaded with 37 passengers, many of whom were “in the know” since public information had indicated a starting time of 9.00 am. A simultaneous southbound departure was made from Gungahlin. Elaborate arrangements were made to handle crowds at Civic, with Northbourne Avenue closed off to enable people to be marshalled into multi-lane queues. On a fine warm day - and with free travel – the new service proved popular, with some 25,000 trips being recorded for the day. Many trams carried standing loads.

Reports indicated that trams on Monday 22 April were also well loaded, no doubt with passengers enjoying a novelty ride since this was a public holiday (Easter Monday). Fares were charged from the Monday morning although from 29 April all buses and trams in Canberra were free for a month to help introduce a substantially revised bus network.

It is noteworthy that Canberra Metro has made strenuous efforts to avoid using the word ‘tram’, indicating that this is a light rail service run by light rail vehicles. (At one point the word ‘train’ was favoured but this has now been dropped.) The very extensive media coverage of the opening, not least in the *Canberra Times*, has challenged this, making frequent use of the word ‘tram’. And the ACT Road Rules specify the term ‘tram’ so it is difficult to see that its use will not become widespread.

So trams have come to Canberra, as envisaged by Canberra’s designer Walter Burley Griffin and included in a map published in 1912. Controversial in recent times, and bitterly opposed by some politicians but supported by voters at successive elections, it is to be hoped that it attracts strong patronage and that stage 2 from Civic to Woden proceeds as planned. As Chief Minister Andrew Barr said at the opening on 18 April, “this is the moment that Canberra grows up”.



Red letter day: ACT Chief Minister Andrew Barr and Transport Minister Meegan Fitzharris are joined by Andrew Leigh, Federal Member for Fenner, and Senator Kristina Keneally to declare open Canberra’s new light rail line on Thursday, 18 April. By week’s end, 100,000 people had travelled on the Civic to Gungahlin line. Peter Clark



No. 014 bound for Gungahlin passes 012 inbound to Alinga Street. They make easy work of the grade along Flemington Road at the highest point on the new line. Dale Budd

Inbound from Gungahlin on a mid-morning service, car 006 rounds the curve on Flemington Road that separates the suburbs of Franklin and Harrison.

Randall Wilson



Book Review

The latest offering from Transit Australia Publishing is something a little different; an illustrated atlas of the tramways of Australia and New Zealand.

Compiled by Hugh Ballment and Carl Segnit, "An Illustrated Tramway Atlas of Australia and New Zealand" is a 120-page hard cover volume that features coloured maps of the various tramway systems that exist or once existed in both countries.

The atlas is bound so that pages can open flat as far as possible.

Actual trackage is shown wherever possible and each system is portrayed at what is considered to have been its "maximum extent". Mr Ballment explains that some editorial decisions had to be made about what was in fact the maximum extent. Former trackage is mostly shown as dotted lines but there are exceptions such as the Footscray lines in Melbourne that closed in 1962.

Each system is supported by basic details as first opening and final closing dates. Colour illustrations, many from the 1950s and 1960s, support the maps. With a work of such magnitude, the publisher acknowledges a few uncertainties particularly among the systems that closed in the 1950s.

The maps have a clean, crisp style reminiscent of some Australian street directories.

One enlargement I found particularly interesting was the Adelaide city area in the "traditional" era (1909-1958) with grand union junctions and several "city loops".

Museums and systems under construction (e.g. Canberra) are also included. An interesting feature is "Trams on public display" comprising pictures of trams from different systems currently or recently on display at restaurants and other venues.

The layouts of some of the systems such as the SEC tramways, Sydney and Brisbane will be familiar to many older readers but detailed tramway maps places like Fremantle and Dunedin are uncommon.

Being a "multi modal" enthusiast, I would have, perhaps, liked to have seen the inclusion of maps of Australia's former trolleybus systems especially since many of the routes followed former tram lines but that certainly does not detract from the atlas.

This very attractive work from Transit Australia Publishing deserves a place on the bookshelves of anyone interested in Australian or New Zealand tramways. Highly recommended!

Recommended retail price is \$69.95. Copies are available from Transit Australia Publishing, transport bookshops and selected retailers.

Paul Nicholson

BENDIGO

BENDIGO TRAMWAYS

1 Tramways Avenue, Bendigo, Victoria 3550

www.bendigotramways.com

Bendigo Tramways

Birney 15 - The Royal Express

Birney No. 15 is playing a part in enlivening Saturday nights in Bendigo.

From 23 March to 13 July, the Birney is assuming the role of the 'Royal Express', when Dame Elizabeth III a self-appointed member of the Royal family hosts drinks along Bendigo's Pall Mall between 6.00 and 7.30pm. Dame Elizabeth promises an amusing and

entertaining interlude in ever-so posh and delightfully dashing attire as she tests your knowledge and shares some outrageous stories about the world's most famous family. For those captivated by all things royal, the tour on No. 15 provides just the opportunity to give the royal wave as they roll along the city's well-known boulevard.



All aboard the Royal Pop-up Tram!

In another outbreak of royal fever, a giant Union Jack currently occupies pride of place on the piazza in Rosalind Park in central Bendigo. The representation of the British flag is associated with the 'Tudors to Windsors' exhibition at the Bendigo Art Gallery.

Locals and visitors to Bendigo are encouraged to step aboard the Royal Pop-up Tram, relax in one of the booths or pull up a bar stool to enjoy the view of Alexandra Fountain that was opened in 1881 by Prince Albert Victor and Prince George. The story of their visit can be read on board the tram which is open from 10:00am to 2:00pm, Wednesday to Sunday. It will be stationed at the Piazza until Sunday 14 July.

Birney 15 as the Royal Express with 'Dame Elizabeth III' at the entrance to the depot.

Bendigo Tramways



The Royal Pop-up Tram at the Piazza in Rosalind Park.

Bendigo Tramways



Birney, our depot cat

We are sad to announce that Birney the cat passed away peacefully on 15 April after a battle with cancer. Birney joined our team in 2014, quickly stealing the hearts of our staff members, the wider community and visitors alike. Birney often received postcards and presents in the mail, and it wasn't uncommon to receive phone calls asking "where do we get off the tram to meet Birney the cat". Birney has been buried under the palm tree in front of the Bendigo Tramways Depot and Workshop. We will miss you Birney!

Birney, the Bendigo Tramways depot cat.

Bendigo Tramways

BALLARAT

BALLARAT TRAMWAY MUSEUM

PO Box 632, Ballarat, Victoria 3353

www.btm.org.au

Dave Macartney and Warren Doubleday

Floral Tram

This project involved a huge community effort with over 100 volunteers pitching in to recreate the floral trams of 1938 and 1939.

Almost 40 flower-making workshops were held at the depot, at community locations and even in homes to produce around 5000 plastic flowers from recycled plastic bottles and other materials.

Flowers were made by cubs, kindergartens, Link Up, Ballarat Regional Industries, the Sebastopol Mission, Ballarat North Community House, the Elizabeth Brown Day Care Centre, Sing Australia Choir and other community groups. The Museum thanks all these organisations and the team who arranged this event.

The big task of putting the flowers on to the tram, W3 661, then began. The depot workshop team fixed wooden battens and large heavy-duty plastic sheets, cut from bulk fluid tanks sheeting to the side of the tram. The former holes in the panel that once

held the advertising sheets were very useful once again. Working in the hottest part of the shed during December, January and February, Pam Waugh and her crew planned the layout of the many coloured flowers and then glued them to the sheets with a glue gun.

The formal launch took place at Gardens Loop on Sunday 24 February with City of Ballarat Mayor, Samantha McIntosh, formally launching the tram. Samantha even left her son's wedding reception for the event. Many of those who provided the flowers attended the event. Left-over flowers were used to make a selfie booth and to decorate display boards. Casual visitors were intrigued with the flowers and the way they were used to decorate the tram. It was certainly a spectacular vehicle.

The tram ran on the Saturday and Sunday of the Begonia Festival and was by far the most popular tram on the weekend. Unfortunately, on late Sunday afternoon the tram was involved in a collision with a 4WD which cut across in front of the tram without

The heavy-duty plastic sheets, fixed to timber battens in-turn fixed to the tram using the old advertising board holes. The bags of plastic flowers can be seen in the windows. 18 January 2019. Warren Doubleday



On its way to the formal launch on 24 February 2019. Warren Doubleday



The Mayor of Ballarat, Samantha McIntosh, launches the tram on 24 February 2019. Warren Doubleday

warning and caused extensive damage to both vehicles. While all emergency services attended, there were no injuries requiring hospital admission. This was a very premature end to very successful community project that had achieved a lot of publicity. On the Labour Day Monday, there were vastly more people than normal visiting the depot to view the tram after the accident had been reported in *The Courier*.

The Flower Tram team were dismayed when they found out about the collision. The Museum has received many messages expressing sadness on learning of the damage to the tram. Though some of the panels have been removed to access the damage we are still getting plenty of visitors coming specifically to have a look. All the panels will be stored and may reappear again at some time in the future.



The Floral Tram project leader Pam Waugh has her photo taken at the launch on 24 February.

Warren Doubleday



Details of the flowers.

Warren Doubleday



Saturday evening wedding charters are practically a weekly event at present. They provide a welcome financial benefit for relatively little work. After the bridal party is picked up, they enjoy drinks and nibbles and some private time together before their tram delivers them to Pipers by the Lake. Once there

Summer and autumn tram services

For the first time summer running started on the Saturday before Christmas and trams ran smoothly every day until Monday 28 January. The only exceptions were 24 and 25 January - two days of excessive heat. Very few people venture into the gardens on such days and the popular playground is always empty as the equipment becomes too hot to touch!

As expected, when running a daily service, there are the occasional problems, but our workshop volunteers quickly responded and fixed these temporary difficulties. Christmas/January holiday patronage was slightly lower than the previous year as numbers gradually tapered off due to the hot weather in January. The Museum thanks our crews who provided the tram service and the depot volunteers who kept the trams serviced and clean.



You have to have a Selfie Booth these days. Peter Waugh poses for a photo on 24 February.

Warren Doubleday

April Fool's Day: Roger Salen created this image of a shortened W4 which he posted on Facebook. The caption read: 'We have been using W4 671 for wedding groups for a while now. Most groups are less than 10 people so there is a large amount of wasted space on a W4. To solve that problem, we have modified #671 to fit in with our needs.'



the party can make a grand entrance after all guests have assembled.

During the Begonia Festival, 9 to 11 March, the usual intensive service with free travel was provided through a sponsorship with the City of Ballarat. Over the three days, some 6800 passengers were carried. This was down slightly on previous years due to rain falling at the critical time on the Sunday afternoon, when people deserted the gardens.

New crews

Four new drivers have qualified over the past few months, three of them in their twenties or thirties, much to the relief of the older brigade, who thought they may have to go on forever. Another two potential drivers are also in the wings.

Bungaree

The Bungaree storage containers and sheds have been fitted with cameras and alarms and connected to a monitoring service. The system is like the one fitted at the depot and can be monitored by mobile phone. The CCTV at the depot has proved invaluable in sorting out little events which occur, and mischief makers such as possums that often explore our premises during the night.

Wendouree Parade track relay

The City of Ballarat is nearing the completion of preparation of the necessary documents for the relay

of our Wendouree Parade track from Carlton Street to Depot Junction. The project is being jointly funded by a Victorian Government grant through the Pick My Project program and the City of Ballarat. Once the documents are completed, tenders will be called from qualified contractors.

In the workshop

Workers in our workshop continue to be very busy with many jobs being undertaken. These include continuation of the reconstruction of ESCo No.12, a project that includes rebuilding the roof and the underside of the tram. One of our recently joined volunteers is working on air-operated equipment such as brake valves, windscreen wipers and compressors. One task he has undertaken was to ensure that the air intake filters on our trams were clean – a dirty job as they get rather dusty. A new large heavy-duty work bench has been built by the depot team to facilitate this type of work.

Bequest

The Museum has been the beneficiary of a substantial bequest from the estate of the late Lloyd Rodgers. Other beneficiaries include Bendigo Tramways, the State Library of Victoria and several other worthy causes. With so many important projects under way at present the Board will, in the coming months, determine the project on which the bequest can be best spent.

BYLANDS

TRAMWAY MUSEUM SOCIETY OF VICTORIA

38 Piccadilly Crescent, Keysborough, Victoria 3173

www.tramwaymuseum.org.au

From *Running Journal*

Around the museum

Work has recommenced on the repainting of tank car 7W. This task was commenced over ten years ago by an enthusiastic group in an effort to make the car more presentable. However due to a change of circumstances in late 2009 the project stalled. After a long sojourn, the group has returned to continue their good work.

Work is also continuing to fit trolley poles and bases to Adelaide H 368. Hooks and bases obtained from Melbourne have been modified to fit, and new base mounting blocks have been made and fitted.

In other news, a small group has undertaken changes to some of the displays in the Exhibition shed. The

former revenue counter from Malvern Depot has been relocated and repaired to show how it may have looked in its earlier days. During the relocation it was found that when it was originally put on display around 2010, it was not held together well. This has now been rectified.

Society trams at Hawthorn

The Society is still pursuing this issue following meetings with Victorian Government officials, but progress is still slow with further meetings possible later in the year. We expect the cable tram set will return to Bylands in the near future.

I'd like that!

Trolley base timbers and trolley pole hooks have been fitted to Adelaide H 368 ready for installation of bases and poles.

Graham Jordan

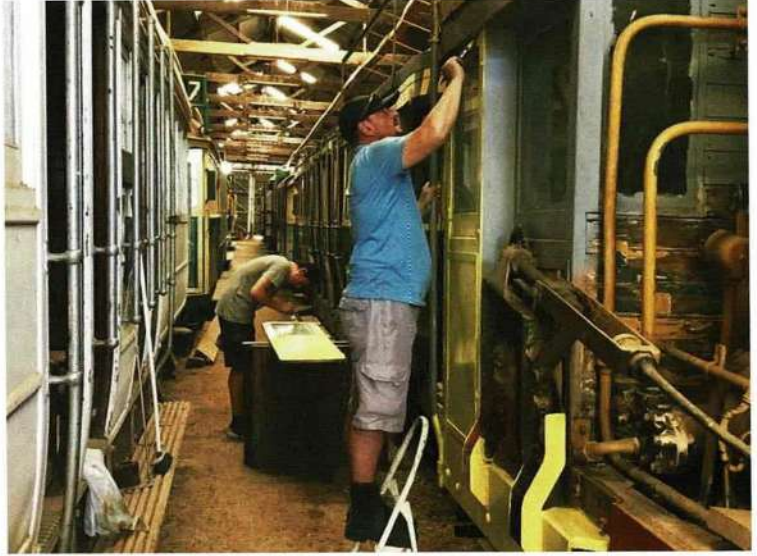


The Society's cable tram set – Dummy 28 and Trailer 256, at Hawthorn Depot.

Peter Winspur

Work has recommenced on repainting tank car 7W.

Michael Fedor



Work on the renovation of the revenue counter in the Exhibition Shed.

Michael Fedor

Another new resident, privately owned W2 650, near the Crock Shed at Bylands.

Michael Fedor



Vale - Keith Sydney Kings (28 November 1928 – 29 March 2019)

Noted tramway historian and leader of tram preservation Keith Sydney Kings passed away on Friday, 29 March 2019.

He was the longest serving and last founding member of the Tramway Museum Society of Victoria.

Keith was interested in all forms of land transport, whether tramways, railways or road. His knowledge and interpretative skills made him become one of the most well-known and respected transport historians. Many publications were either written by him or relied on major contributions from him. Many of these have had bible-like status for enthusiasts for many decades.

Keith began recording transport history from an early age, and items from his collection of thousands of photographs of Australian transport operators and their operations have appeared worldwide. He was an early member of the Australian Electric Traction Association; by the end of 1950 he was Joint Secretary of the

Melbourne branch of the AETA and a contributor to the Association's journal.

Keith was a member of many transport preservation organisations. In 1963 he was a founding member of the Tramway Museum Society of Victoria, in which he held the membership number 3. Keith's knowledge and stature resulted in him being held in the highest regard by transport operators. This enabled him to win over and gain the confidence of people in authority for the benefit of the TMSV and later the museum at Bylands.

Keith was made an Honorary Life Member of the TMSV in the early 1980s. He spent over 40 years working at the Bylands site undertaking many roles. For the best part of that time he was a continuing member of the TMSV Board.

In recent years due to ill health, Keith was unable to actively contribute, but this did not diminish his love and respect for the TMSV, the museum or the trams and buses he so dearly loved. His input and devotion will be remembered and cherished.

FERNY GROVE

BRISBANE TRAMWAY MUSEUM SOCIETY

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www.brisbanetramwaymuseum.org

Peter Hyde

50 years since 1969

The last couple of months have seen work at the Museum focus largely on preparations for the major gala open day held to mark the 50th anniversary of the closure of the Brisbane tramway system.

We hoped the overhaul of prototype FM 400 would be finished to enable it to be launched into traffic that day. However, while all the physical work was essentially

finished, testing to satisfy various regulators was not. Major cleaning, mowing and pruning made the grounds an extremely pleasant and inviting sight on the day. Numerous displays by community groups, other rail societies, vintage motorcycle clubs added to the atmosphere along with food stalls and children's rides and activities.



Although FM 400 was not certified for public operation in time, it was driven out of the Depot for a demonstration run after the re-enactment of the last Dropcentre operation.

Dave Hinman



Dropcentre 341 re-enacting the ceremonial last run of a Dropcentre on Saturday, 12 April 1969. It is being driven by Cr Steve Toomey. The piper is Sarah Pointing, who is the great-granddaughter of one of the pipers of 1969.

Both photos by Mal Rowe



Radio and TV publicity plus a Facebook campaign in the fortnight before Saturday 13 April saw almost 900 paying visitors attend between 1:00pm and 8:00pm.

At 3:00pm the Museum Patron and Lord Mayor Cr Adrian Schrinner officially opened the event and delighted the crowd by stating that closing the tramways was the worst decision ever made by the City Council. His speech was followed by a re-enactment of the operation of the last Dropcentre tram.

Prototype Dropcentre 231 had been kept at Ipswich Road Depot for use on a farewell tour by the Old Comrades retired employees association on Saturday 12 April 1969. At the end of the tour it was piped into the depot by Ron McKay and Angus Campbell. Sarah Pointing, the great-grand-daughter of Angus, re-

enacted his role as 341 was driven into our depot by Cr Steve Toomey. This part of our depot was formerly part of Ipswich Road Depot.

A few minutes later Panther bus 722 - the final one in the fleet that replaced the trams - emerged from the back of the depot. It has just completed a \$100,000 body restoration for the Queensland Omnibus & Coach Society and had only been unveiled by the Lord Mayor outside City Hall the previous day. The next part of the event was the presentation of FM 400 which was driven out of the depot for a brief display before returning inside.

Regular tram service then resumed until 8:00pm when the remainder of the crowd were invited on board for a ceremonial 'last run' up the hill. It was driven half way



After the Dropcentre last run re-enactment, the Queensland Omnibus & Coach Society presented restored Panther Bus 722 to the gathering. This was the final Panther bus on the order for the tram replacement and has just completed a full body restoration at a cost of almost \$100,000.

Both photos by Mal Rowe



At the conclusion of the evening, 554 made a ceremonial 'last run re-enactment'. It was driven for part of the journey by Stephen Tyrrell - the first Secretary of the Museum who drove it part of the way on its original 'last run'. Here the passengers disembark before it entered the depot.

Dave Hinman



by Cr Toomey who then handed the controls over to Stephen Tyrrell, the only surviving person who drove 231 for part of its ceremonial 'last tram' run in 1969.

The anniversary day was a great gathering of tramway enthusiasts from around Australia and New Zealand, and many old acquaintances were renewed.

HADDON

MELBOURNE TRAMCAR PRESERVATION ASSOCIATION

324 Sago Hill Road, Haddon, Victoria 3351

www.mtpa.com.au

Anthony Smith

Restoration of 792

During February, another major goal in the restoration/rebuild of this tram was achieved with the exterior of the roof boards being covered in Duram Azcothane.

The work of preparing and covering the roof was outsourced to Bendigo Tramways, whose tradesmen were sent to Haddon to undertake the project. Over three days, the roof boards had all their countersunk screw holes filled and sanded after which the roof covering was applied.

During January, new 'D' mould cover strips were fitted to the driver's bulkhead lower panels, and two new roof ribs and centre line brace boards were fitted to the cabin roof at both ends.

With the side sections of the roof boards now covered, work has commenced on fitting the new roof ribs to the centre of the car to enable reinstatement of the vent roof. So far, new rib extension pieces have been fitted to the driver's and drop-centre bulkheads.

The overhaul of the DH16 compressor for this tram is now well advanced. The case of the unit selected for rebuilding has been dismantled and steam cleaned to remove all traces of grime. During January, the case was reassembled, and the crankshaft, main gear and pistons fitted. New piston rings and bearings have been used as required. The armature, which had returned from our electrical contractor during the same period, was fitted and the pinion thrust washers adjusted for correct alignment.



W2 357 undergoing routine servicing in the carbarn.

Daniel Edwards

*Below left:
New drip rail timber mouldings
being fitted to the south side of
792.*

Anthony Smith

*Anthony Smith fitting new
ply panels to the drop centre
bulkhead of 792.*

Daniel Edwards



New plywood panels for the upper bulkhead sections of the drop-centre and driver's bulkheads were fitted in early March. The moulded timber drip rails have also been fitted. There was a considerable amount of work needed to get the cab end sections of drip rail to fit properly due to variations in the alignment of the bow rails that occurred in the course of repairs after a collision during its operating years in Melbourne. Work is now concentrating on plugging the numerous countersunk screw holes in the drip rails.

Overhead

During February, all the trolley wire ears on the three roads within the carbarn were replaced with new units

that are more suitable for carbon skid poles. The old two-screw hole ears had come from the Yallourn

Daniel Edwards is resurfacing No. 1 road with blue metal screenings. Anthony Smith

Below right: New 'D' mould cover strips being fitted to the driver's bulkhead panels on 792.

Jacqui Smith

Anthony Smith assembling the overhauled DH 16 compressor for 792.

Daniel Edwards



Lower terminus tram shed

The earthing of the steel shed structure was completed late January and work on provision of a traction supply indicator light system commenced. This will assist in confirming whether the traction supply is available or has been isolated by the pole mounted isolation switch link.

Parts wash shed

Construction of a small shed built to house our parts wash tank has been completed and work is under way on the provision of light and power. The parts wash tank has now been relocated from the truck shop, and the opportunity was taken whilst the tank was drained to fit a new pump and switch. The hydraulic bearing press unit has also been relocated to this shed.

open cut tramway. At the same time, the opportunity was taken to remove a couple of minor kinks in the trolley wire using the custom-built straightening tool we fabricated for this purpose. In recent months we have been experiencing trolley pole tracking problems with the mainline/4 road frog pan. On 4 March, our overhead crew carried out adjustments to one of the pull-off spans and realigned the frog, which appears to have cured the problem.

View showing the roof of W5 792 after recovering in Azcothane. Anthony Smith



LOFTUS

SOUTH PACIFIC ELECTRIC RAILWAY CO-OP SOCIETY

PO Box 103, Sutherland, NSW 1499

www.sydneytramwaymuseum.com.au

From *SPER News*

Railway Square waiting shed

Work is continuing on the restoration of the central signal box. All the windows have been restored and most have been re-installed most of them together with painting above the main roof.

The repainting of the east and west interior walls has commenced. The walls were first washed down with sugar soap to remove all the grime and mould that had built up over the many years since the last repaint. A start has been made with the application of the first coats of paint to the west side with two and a half 4-litre cans of dark cream paint used already, remembering that the walls are 20 metres long by over 4 metres high.

Our Chairman, Howard Clark, has provided 30 roof tiles to match the Wunderlich Modern French type that are currently in place. These will be used to replace the currently broken and missing roof tiles. We were unable to source any second-hand tiles after recent hail storms in the Sydney area had depleted the supplies.

Track and associated work

The TAFE crossing new points and track relay were completed in time for the tramway festival on 24 February. The infrastructure team worked day and nights well past midnight over a Tuesday, Wednesday, Thursday period to ensure the track was ready for the final concrete pour on 16 February. The crossing frog on the new points was recently recovered from Anzac Parade, Kensington, having been removed for the new light rail track to be installed. This was the first tram movement over any of the Kensington rail since 25 February 1961.

The track on South Hill beyond the re-laid Depot Junction points was originally laid as a two-car head shunt in 1987 using second hand timber sleepers. In 1993 this track was extended out through the south gate to connect with the National Park line using new treated sleepers. The hill has often suffered from heavy scouring during storms, and with the sleepers approaching life expiry it was decided to relay the South Hill in mass concrete. The relay work was

Concreting track at the TAFE crossing on 2 February. 12 cubic metres of paid concrete was delivered in two trucks, one of which is seen here.

Martin Pinches



postponed several times over the last 18 months pending the arrival of Variotram 2107. After its long-delayed arrival last October the work was again postponed for the busy Christmas/summer holiday traffic period.

This relay work is a complex project, still under way at the time of preparation of this report. Prior to its commencement, two 66-metre lengths of recycled Kensington rail were pre-welded to minimise closure time. 34 steel sleepers were cut from old worn rails.

On 6 March work started by hand-excavating beside the rails to expose dog spikes and tie bars. On 13 March P 1497 made the last run to National Park, after which the infrastructure team took possession of the line for heavy works to commence.

Major excavation took place on 23 March when our earthmoving contractor attended with his machines. More than 22 trips were made to relocate the excavated material alongside the western side of the recently concreted track north of the TAFE crossing

to remove the drop from the new rail height to the old ground level at that location, after which the fill at the crossing was compacted, spread and levelled.

Due to the significant size of the excavation work, the contractor returned on 6 April to complete the job and to move the replacement rails roughly into position.

A \$2500 drum of 4 core 415-volt cable was purchased and will soon be run from the northern yard meter box to No. 3 substation through the 100 metres of underground conduits previously laid. This will provide power to the building and will facilitate future welding and security lighting in the area.

Overhead

On 23 February two replacement side arm brackets were installed on poles 329 and 333 to replace those damaged on the Sutherland line by falling trees. Another side arm bracket badly bent by a fallen tree, on pole 335, has also been replaced.

Trackwork being carried out on South Hill on 27 March. Mike and Ian are lifting sleepers assisted by Charles, Noel, and Matthew.

Richard Jones





Laura Huang is guiding Sydney P 1497 around Cross Street on 31 March. Cross Street is being used as the Depot Junction is out of use due to the south hill track rebuild. Richard Jones

Trees along the Sutherland line are a problem and they need to be cleared and cut back. On 30 January some trees were cut back and removed, to the south of TAFE crossing. The trimmed branches were later mulched up using the museum's tractor-mounted mulcher.

On 15 February the tower truck was used to transfer the contact wire to a new span wire erected between new poles 361 and 362 at the Sutherland terminus. This frees up two poles which are no longer in use and they can now be moved elsewhere at the Sutherland terminus so the overhead can be erected on the eastern track.

The overhead crew are preparing the necessary items for the alteration of the overhead in conjunction with the South Hill track relay. Additional pull-offs are to be installed on the sharp curve near the No. 2 substation.

The Board is liaising with John Holland regarding proposed overhead works. The company has quoted to do some work on our overhead to make it pantograph compatible and also to install additional pull offs on the curves along the Royal National Park line.

Workshop and maintenance

In the workshop the two trucks from **PCC 1014** took their turns on the work stand for cleaning, painting and replacement of the oil from the drive gears. They were back under the car by 23 February. A new metal draught shield has been made and fitted, to replace one that was missing from the car when we obtained it in 1988. Both headlights have been refurbished. We have been promised some spare parts from Muni in San Francisco and are awaiting advice on what will be made available. These parts will restore 1014 back to operational status as well as completing the interior handrails and making all doors operational.



The restoration of San Francisco PCC 1014 is now complete and it was moved from the workshop to the display hall on 27 April. Martin Pinches

The wiring of **Sydney C 37** is continuing, while sheet metal wheel arch covers are being made and fitted under the seats.

Melbourne cable trailer 589 has had the ironwork for the new end platforms fitted while a new corner post has been made and fitted. The window posts will follow soon. Many small clerestory windows for the car have been prepared.

Work continues on preparing **Variotram 2107** for service. The roof valences, stripped of their all over advertising, have been refitted. The last of the advertising wrap has been removed and work continues on the 'western' side roof skirts.

In the service life of these vehicles overheating of the 'train' computers when the trams were stabled was an ongoing issue, so we have enhanced the cooling of these computers by replacing the existing fans with bigger ones and adding additional fans. This should ensure the computers do not shut down when the tram is stabled between runs.

During 2107's time in storage at Penrith one of the large side windows at the end of the tram was broken. It was replaced on 27 March; this was not an easy task as firstly the spare window had to be retrieved from the rear of the crate of glass at North terminus. After transfer to the top shed it was manhandled to the very end of 2107, placed into the correct position and sealed all around using the correct Sikaflex adhesive. This work was very difficult as the glass was heavy and the area very cramped.

Quotes are being organised from an engineering company for the reprofiling of 2107's wheels on site. The recommended quote will be forwarded to

Transport Heritage NSW for their approval prior to work being commenced.

Our contract painter, Barry Mossop, commenced work on **trolleybus No. 19** during February. He firstly found that the roof paint was in extremely poor condition, necessitating almost complete stripping down to metal before priming and final top coats of grey. He then started preparing the sides, front and rear of the vehicle prior to painting. Again, some panels had to be stripped back to metal due to the existing poor paint surfaces before primer was applied. The work has taken longer than initially envisaged, with an increase in costs. The top coats of both green and cream have been completed, and No. 19 looks an absolute credit to Barry's workmanship.

Meanwhile templates have been made for the missing window glass and beading has been installed for the new glass that has now been received from our glazier. The new windows will be installed as the painting is being completed.

Launceston 14 restoration progress

Our team in Launceston received a visit from Hugh Ballment and Howard Clark on 29 March. They have made remarkable progress and need to be congratulated as an effective and efficient team. Much of the ground work has now been completed. Seats and backs for the drop end cross bench seats have been completed and are finished with three coats of clear varnish. All were built on site by Rob Hodge and John Binns. The two driver's bulkheads are now completed and installed and fitted with toughened glass panels, to the credit of Barry Cole and Graham Wright. Tie rods which will be hidden behind the seat backs have also been fitted.

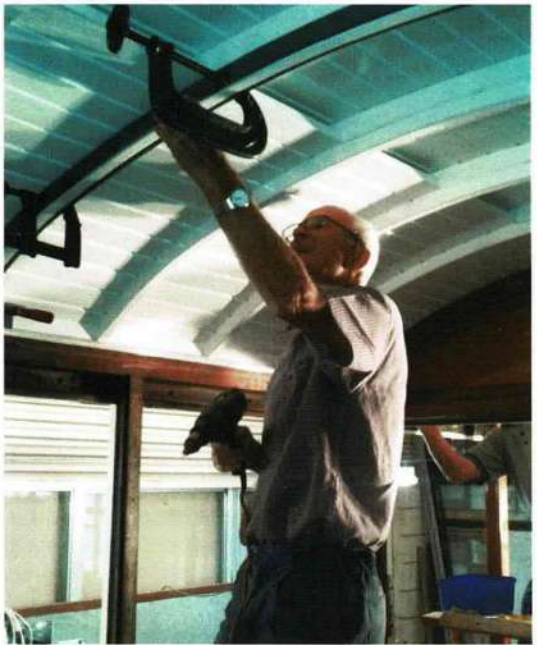
Alan O'Byrne spray painting the sand boxes for car 14, he sand boxes were manufactured by Kerry Thompson. Foot plates for the car are hanging in front.

John Binns





Alan O'Byrne finishing the black, red and gold linework. John Binns



Rob Hodge fitting strengthening bars for the trolley base. John Binns



Graham Wright and Rob Hodge refitting Huon Pine interior panelling to the saloon of tram 14. John Binns



Rob Hodge refitting Huon Pine interior side panels. Note the Huon Pine original panels. John Binns

Alan O'Byrne has removed all old paint back to original timber and Rob Hodge has made good with repairs as necessary. New white paint has been applied to the ceilings. Window frames, quarter doors and

doors in the main saloon, now reflect the richness of the Tasmanian blackwood. Alan has also spent considerable time and patience in applying decorative black, red and gold trim to the maroon panels to replicate the original livery. Side panels and the

two end aprons have had all voids filled by Quentin Manning in readiness for the final maroon and cream to be applied. The main maroon was applied by Gene Finn of Finns Body Works and thanks are due for his professional time.

Sand boxes and their components were manufactured from flat plate by Kerry Thompson to replicate the original. It is difficult to pick the difference! Brass fittings, (door latches, cord guides and fittings) were made on site by Barry and Graham.

Throw over upholstered Brill Winner seats (green vinyl, from Victoria) are being fitted in the saloon, in lieu of the original timber style.

The coloured slide destination panels were made and fitted by John Binns, as follows:

Blue – depot,

Red – Talbot Road – Basin Road,

Clear – Mowbray – Carr Villa,

Green – Newstead – Trevallyn, with the covering light box under construction.

ST KILDA

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) INC

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Colin Seymour

Re-commencement of operations

Tramway operations recommenced from the Museum site to the location of the former Mangrove Street Loop (just before the road crossing) on Sunday, 10 March 2019 - coincidentally 110 years and 1 day since the opening of Adelaide's first electric tram line to Kensington on 9 March 1909.

Operations ceased on 28 October 2018 to allow an internal review of Museum operations to take place.

This was a voluntary decision made by the Museum Committee. In the interim, the Museum site was open as a static display. The review concluded that operations could resume to the former site of the Mangrove Street Loop. Plans are already in motion to ensure repairs to part of the track beyond the Mangrove Street Loop area are carried out to allow for the full resumption of service to the St Kilda Adventure Playground terminus.

A family relaxes on the ramp at St Kilda after inspecting the exhibits before taking a tram to Mangrove Street. Not apparent from this location, the trams show 'Hotel/Mangrove Street' where this destination can be displayed. In the case of W7 1013, 'St Kilda Rd' is shown on the roll.

John Radcliffe





Two of the AETM's younger volunteers, Nic Benn and Stefan Driver are seen here preparing No. 1971 for brake servicing on 4 April 2019. Nic Benn

We take our responsibility for safe tramway operations very seriously and to this end, external assistance has been sought to help review our operating procedures. The feedback received from the consultant has also meant that we are in a position to recommence operations.

The temporary terminus is not suitable for passengers to disembark and they are required to stay on board the trams while the driver changes the poles for the return journey. The conductor remains on board to ensure that passengers do not disembark.

Currently four trams (186, 294, 381 and 1013) are available for the truncated operation pending servicing and cleaning of other trams.

Rolling stock

The bodywork of the Bib & Bub set is now very close to completion. The next major task is the development of World War II style interpretive signs and advertisements for the interior advertising panels.

Work will soon be carried out towards the completion of the mechanical and electrical aspects of the project.

New road access to St Kilda

As part of the Northern Connector Project, the Waterloo Corner Interchange overpass opened on 26 March 2019 providing new and safer signalled access to St Kilda. Members and visitors heading north along Port Wakefield Road from the city will now turn left into the Waterloo Corner Road extension and cross over the Northern Connector before veering right into Robinson Road. After travelling north for a short distance, they turn left into St Kilda Road at the roundabout. St. Kilda Road is now permanently closed to through traffic from Port Wakefield Road.

Visitor

Nonagenarian Colin Harry Hazell visited St Kilda recently and yarned about having lived on the Hilton tram line. A notable event was being sent for training at the West Torrens Council Chambers in the use of gas masks during World War II. After the meeting, some boys thought it might be instructive to try some detonators on the tram rails. A drop-centre tram duly came along, and the boys were rewarded by the detonators exploding. The perplexed motorman stopped suddenly but could not identify any problem while the young onlookers fled!

Nonagenarian Colin Harry Hazell at the museum. John Radcliffe



WHITEMAN PARK

PERTH ELECTRIC TRAMWAY SOCIETY (INC)

PO Box 257, Mount Lawley, Western Australia 6929

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Michael Stukely

Traffic operations and service cars

Following the completion of its extensive refurbishment and successful testing by our Wednesday and Thursday team members, Melbourne SW6 891 re-entered regular service at Whiteman Park on Friday 5 April. We are pleased to report it is performing well. Car 891 was acquired with W7 1023 through COTMA. Earlier, it had been with Bendigo Tramways and previously VicTrack. Both trams arrived at Whiteman Park in June 2013 (see Trolley Wire August and November 2013). W7 1023 has been converted to a new role as the PETS works car.

In the December-January school holidays, trams ran on seven days per week as usual. Following the lower-than-usual passenger numbers in November, the December numbers were also relatively low. However, January produced better numbers in spite of six running days being lost due to high fire danger. In December, Melbourne W2 329 and W7 1017 shared the workload almost equally, while 329 was the service car for most of January. February patronage was lower, as expected, with three more running days lost. Cars 329 and 1017 were the service cars



W7 1017 approaching the Bennett Brook stop near the Dog Park on 17 March. The wagons displayed in the shelter have since been moved to the care of the Revolutions Transport Museum at the Village Junction, and the shelter is now popular with picnic groups.

Michael Stukely

Melbourne SW6 891 approaches the Triangle North points as it returns from Mussel Pool to the Village on 6 April. The steel sleepers have been positioned alongside the track ready for installation to replace the remaining timber sleepers on the Triangle East-to-North curve.

Michael Stukely





Len Pearce preparing a steel upright for the safety enclosure around the service pit on 21 November 2018.

Lindsay Richardson

with Perth E 66 running occasionally, including for special functions. We thank all traffic crew members, as well as the maintenance teams, for their generous input of time to keep the trams running during this very demanding period.

A moderate fare increase was introduced in February to help cover our ever-increasing operating and maintenance costs. This is the first fare increase we have imposed since 2005.

Graeme Barkla and John Barlow undertaking repairs to the newly-acquired transportable shed on 23 January.

Lindsay Richardson



Track and overhead work

Repairs were carried out on the Road 4 - Road 3 points on the Car barn fan. Work on the Triangle North-to-East

Curve continued in March with the installation of four steel sleepers to replace rotting timbers. The aim is to complete this stage of the replacement program with 100 per cent steel sleepers on all the main line curves.

Several loads of used steel sleepers have been delivered to our storage area by our contractors. On 6 April the track team sorted 57 sleepers in good condition from the latest delivery, and made them ready for use on the main line.

Work has started on a major program of raising, re-aligning and re-tensioning the overhead on the Oketon Geddes Car barn fan. In conjunction with this, a trial rebuild of an overhead frog has been carried out with the refurbished unit now under test. A second frog is being rebuilt. Repairs were also done on the overhead near Red Dam by Noel Blackmore and Terry Young.

General

On Sunday 21 April the PETS Easter barbecue was held in the Don & Laurie Tyler Car barn, with good numbers of members, family and friends attending.

A certificate of Honorary Life Membership was presented to Frank Edwards, PETS member No. 13. Frank was active in the original group that preceded PETS, the WA Transport Museum, which was based at Castledare in the southern Perth suburb of Wilson. He has been active in many operational areas of PETS as well as serving on the Society's Council. Until recently Frank had been a driving force in the restoration of our WA trams, especially Perth E 66.

The David Secker Memorial Award was presented to Bill Allnut by President, Allan Kelly. This award is presented annually to a Society member who has shown meritorious service above and beyond the normal contribution made by the membership. Bill has been working tirelessly on the body restoration of WAGT (Perth) A class tram 130, the last tram built for Perth.

The Society's constitution has had to be rewritten to comply with changes to the relevant State legislation. The completed draft was accepted by the members at a Special General Meeting on 9 December, and was then submitted to the WA Department of Mines, Industry Regulation and Safety – Consumer Protection, who have approved it with effect from 5 February 2019. Thanks go to David Brown for his marathon effort in drafting and finalising this essential document.

Melbourne SW6 891 enters the Village Mall after departing Village Junction terminus on its second day in regular service in Whiteman Park, 6 April.

Michael Stukely



Ian Kelly steam-cleaning a newly overhauled Melbourne No. 15 truck on 31 October 2018. Lindsay Richardson

Melbourne W7 1017 runs through the Village en route to the Village Junction terminus on 17 March. Michael Stukely





At the conclusion of the Sydney Tramway Museum's Vintage Tramway Festival on 24 February, the first electric tram preserved in Australia, Sydney L/P 154 enters the running shed as the latest electric tram to be preserved in Australia, Variotram 2107 passes in the background.

John Cowper



Daylight testing on Sydney's CBD and South Eastern light rail has commenced.. Coupled LRV cars 003 and 004 made the first run at 10:00am on 11 April 2019, seen here at Kensington Junction.

John Cowper