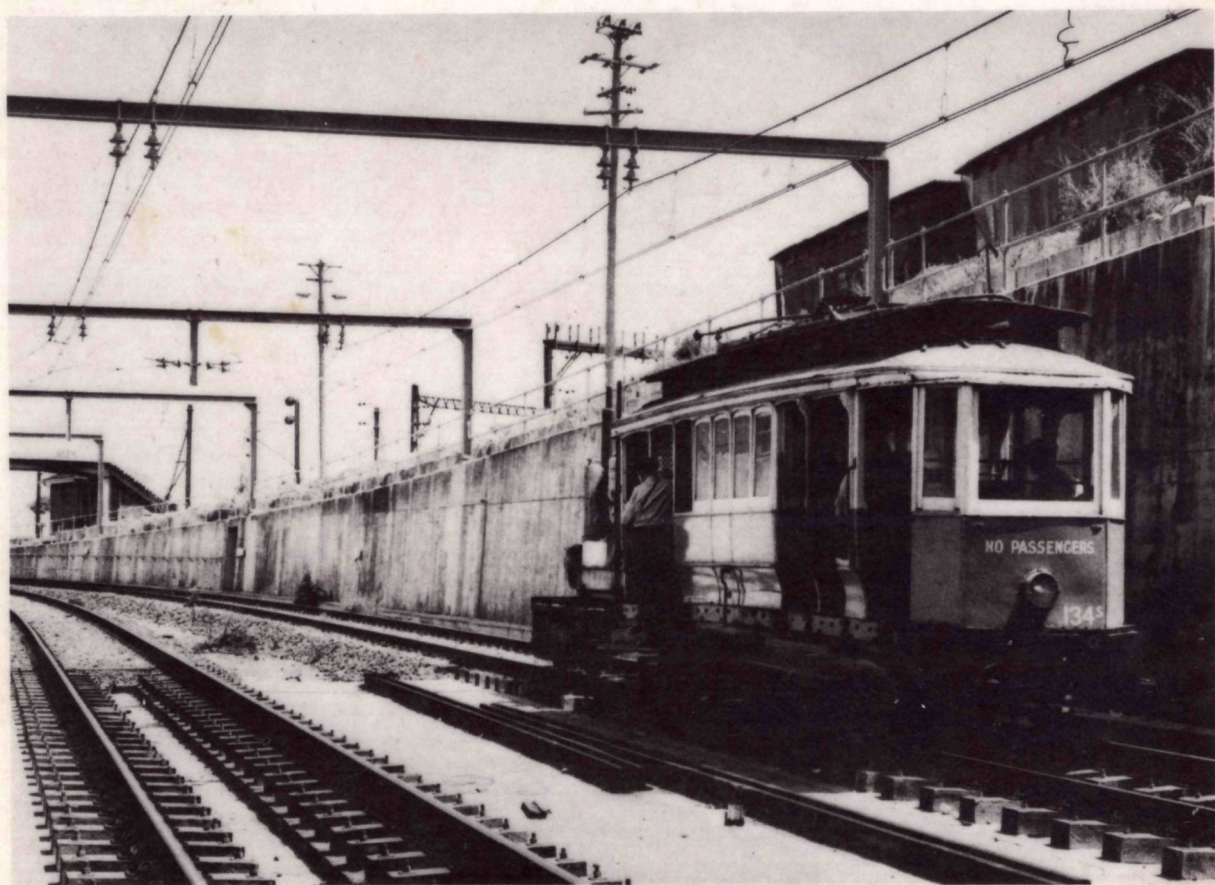


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RETURN TO SERVICE

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CONTENTS

The Williamstown Short Road Ferry	3
Enfield Remembered	9
Sutherland Tramway Depot	
The Closure, August 1935	12
<i>Here and There</i>	
Walka Water Works	16
Trams Return To Port Kembla	18
City Section	19
The Sydney Scene	20
Museum Notes and News	23
Cover Story	
Return To Service	22&25

FRONT COVER: SPER ex Sydney D scrubber
134s on the 1:32 grade down to the tunnel portal
at Erskineville on the Eastern Suburbs Railway
after its Return To Service on 13 September 1978.
It is operating as a diesel electric unit.
- Bob Merchant

Comment...

Museum trams have been on the move in
Australia in 1978.

In January, cars from the TMSV and Bendigo
ran in Melbourne for the Cavalcade of Transport
then in June the Adelaide Tramway Centenary
saw one horse and four electric cars from the
AETM operate on the Glenelg line.

This month's cover story is about another
return to service; this time in Sydney where
there are not even any tramlines to run on. Such
is the versatility of the tram that this does not
matter. In vastly different circumstances and
surroundings to those in Melbourne and Adelaide
ex Sydney D class scrubber 134s is slowly
scrubbing its way through the dark tunnels and
glamorous stations and over the viaducts of the
rapidly nearing completion Eastern Suburbs
Railway from Erskineville to Bondi Junction.
After 17 years of retirement this veteran of 1899
finds its technology still needed in an era when
man has walked on the moon.

Although museums in other parts of the
world have loaned vehicles back to railway and
tramway authorities so that the cars can be used
in their former roles, as distinct from for special
occasions, this is the first time such an
operation has occurred in Australia.

Following on from the success in Melbourne
and Adelaide of co-operation between transport
authorities and volunteer groups, it may well
be that at last the volunteer movement is being
recognised as having an active part to play in
the Australian Community.

The late news of the tramway proposals
in Port Kembla squeezed into this column in
the August 1978 issue perhaps did not fully
convey the seriousness of the scheme nor the
amount of planning that had already taken place.
It has since been announced that options are
held on three trams and that it is hoped to have
them operating for the 1979 Put Into Port Festival.
It is intended to paint the cars in the
town colours of black and white.

Details of tramway involvement in this
years festival are given on page 18.

THE WILLIAMSTOWN SHORT ROAD FERRY

LOWER YARRA CROSSING, MELBOURNE, VICTORIA

By K. McCarthy



The Williamstown Ferry heading towards the Newport shore at the Yarra mouth from the Port Melbourne side, 30 August 1972./ B.J.PARLE

But for the Westgate bridge collapse on 15 October 1970, the opening ceremony of this new Lower Yarra Crossing in Melbourne would have been a double occasion, marked, not only by the opening of the bridge, but also by the closure of the last steam operated vehicular ferry in Australia.

The construction delay resulting from the disaster in 1970, however, caused the ferry to reach the end of its safe working life four years too soon, thus robbing the Yarra of a similar ceremony experienced in Newcastle, N.S.W. on November 1st 1971, when the Stockton Bridge opened for traffic.

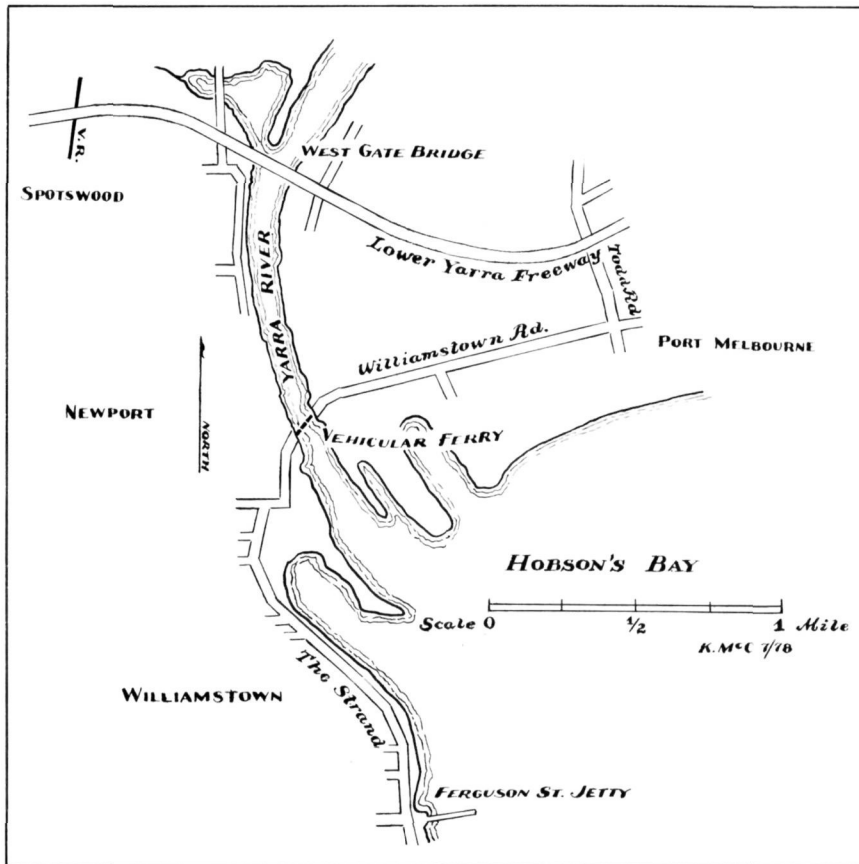
The Williamstown (Newport) ferry was the last steam vehicular crossing to operate in Australia, but unlike the three Newcastle steam vessels (See TW April 1972, June 1972 and June 1973) the Melbourne punt was not a free sailing craft, its course across the Yarra was guided by chains. Its extended operation into this non-steam decade of the 20th century made the vessel a transport curiosity towards the close of its active life.

The Geelong and Melbourne Railway Company operated their railway between Williamstown and

Geelong from June 1857 until January 1859 when a short connecting line into Melbourne was completed by the Government Railways giving the Company trains direct access to the metropolis. Prior to 1859 Geelong railway passengers were forced to make the first portion of their journey down the Yarra by ferry or by The Hobson's Bay Railway Company trains from Melbourne to Sandridge (Port Melbourne) then by ferry to Williamstown before joining the Geelong train for the final forty miles journey.

Port Melbourne was also the terminal for other well known Port Phillip Bay services to Port Arlington, Queenscliffe, Sorrento and Geelong worked by such well known steamers as "Edina", "Hygeia", "Ozone", "Weeroona", "Sorrento", "Williams" and "Courier" while the much shorter Port Melbourne to Williamstown route was handled by the "Gem" and the "Rosny".

The Williamstown Council continued to operate this Port Melbourne to Williamstown service until 1930. This route became a victim of the economic depression of that period as it accumulated a loss of



£2000 for the last year of operation and even with the substitution of a 50 seat launch for the steam vessel "Rosny", the 80 year service could not be saved.

"The Argus" for January 7th 1931 reported that the disused "Rosny" was then tied to the Ferguson Street Pier at Williamstown, but, hopefully, would soon be moored in the Bay to save Harbour Trust fees until a buyer could be found. The "Rosny" had been constructed in Hobart in 1913 and was on the Williamstown run by 1920. She returned to Hobart in the early 1930's where she re-entered Derwent River service.

Concurrent with this passenger run, the Williamstown Council also operated a vehicular ferry service across the Yarra mouth at Newport and with the closure of the Port Melbourne passenger ferry this Newport crossing became known as the Williamstown Ferry.

With the closure of the passenger ferry, Williamstown Council felt that a direct bus service should be established between Melbourne and Williamstown through South Melbourne and Newport using the existing vehicular ferry crossing, but this proposal was held over pending the com-

pletion of a new, larger, steam vehicular ferry then under construction.

The new Westgate Bridge and the vehicular ferry crossing were only two of many schemes proposed since the 1880's to assist the expansion of this somewhat neglected south-western area of Melbourne.

"The Argus" for January 10th 1931 reported on a number of these schemes. During the 1880's, when Melbourne was experiencing a vast public works building boom, a two way traffic toll tunnel was planned under the Yarra mouth to cost an estimated £200,000. The constructing syndicate hoped to retain the franchise for 30 years with the option of a further extension for another 30 years. If the council wished to resume the property at the end of the first 30 years interval an agreed amount of compensation would have to be paid to the syndicate. This scheme won approval, but did not proceed due to some unexplained legal questions not revealed in contemporary reports.

Around 1900 a transporter bridge crossing was proposed for the crossing. Under this scheme an elevated beam, erected high above the shipping, would support a cradle trolley from which a moving

platform would be suspended by cables. This was not constructed due to the high capital cost which would provide a service no better than that available by vehicular ferry.

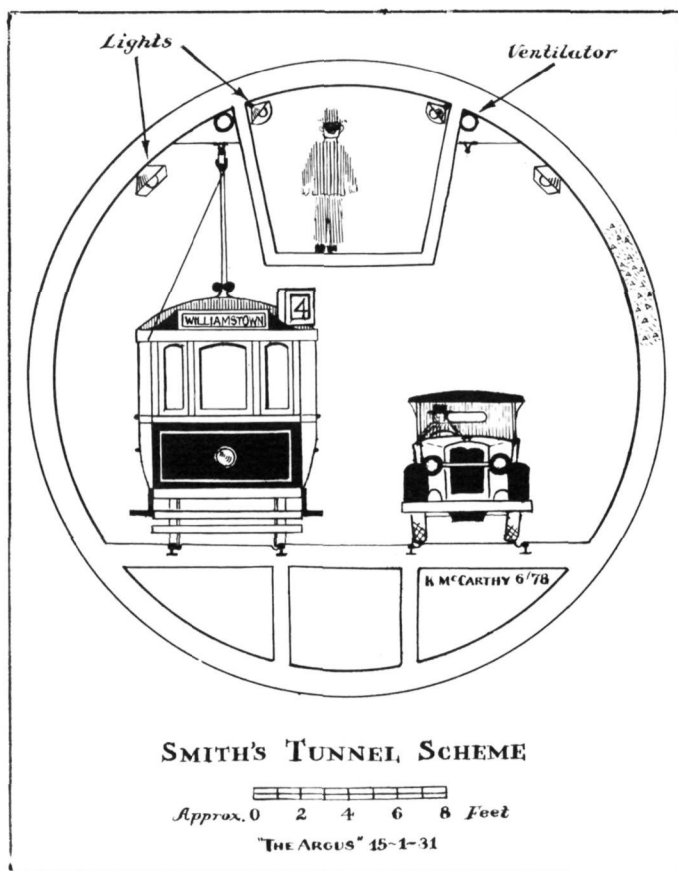
The old vehicular ferry was due for replacement by the end of the 1920's and the transporter bridge project was again presented as an alternative, but work commenced on a larger steam ferry.

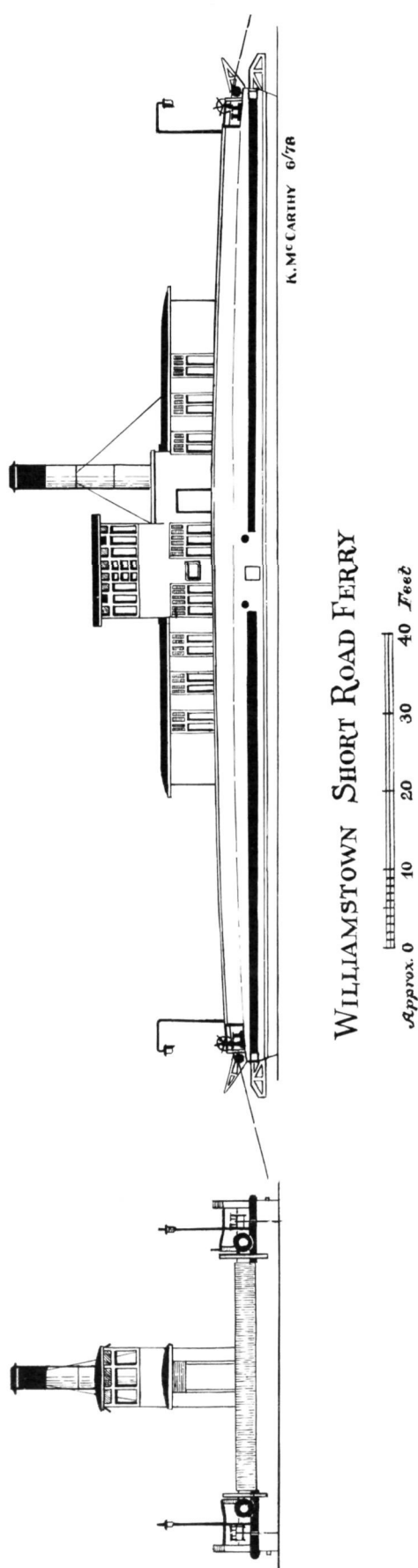
At this time further tunnel schemes were also suggested. One such proposal at the turn of the century had suggested that a steeply graded two way tunnel be built worked by "trackless trams" but this was considered too expensive at that time. On January 8th 1931 "The Argus" reported that although the new ferry was nearing completion the Williamstown Council considered this to be a short term solution to the crossing problem and intended to shortly request the Victorian State Government to share half the cost of a tunnel under the Yarra at Newport. The proposed bore would be 14ft. in diameter, half mile in length and was expected to cost £300,000. A duplicate tunnel would be made on completion of the first to cater for two way traffic at an additional amount of £150,000.

An electric tramway was proposed for this tunnel scheme and while only a single bore was available, one way traffic would be controlled by electric signals. The trams would operate at 40 m.p.h. and would be followed by motor traffic, the tramcars being used to draw out the fumes. While the single tunnel was in use the traffic delays were not expected to be as great as those experienced with the vehicular ferry.

During 1911, Melbourne Engineers B.A and D.B Smith, submitted a tunnel plan for the Lower Yarra crossing to cost between £250,000 and £300,000 but action on this favoured scheme was prevented by World War I. These engineers planned a single bore, 24ft diameter tunnel, 400ft in length, the entrances being reached by steeply graded 1 in 15 cuttings. The tunnel could accommodate two tramway tracks, also available for road vehicles, while a 6ft. high pedestrian access was incorporated within the crown of the arch between the tramway trolley wires.

Smith and Sons again presented this tunnel plan in January 1931, the cost was still estimated to amount to £250,000 and this would carry either M & MTB buses or trams.





Meanwhile the new steam vehicular ferry was being assembled on a slipway near the Newport Power House by Thompson's of Castlemaine. It appears that the boiler, engine and plates were constructed at the Castlemaine plant and assembled during 1930 at the river side. This vessel was designed to carry 32 vehicles, in place of the eight carried on the older ferry, was to cost £36,000 while "The Argus" of January 10th 1931 expected it to be commissioned by April 1931.

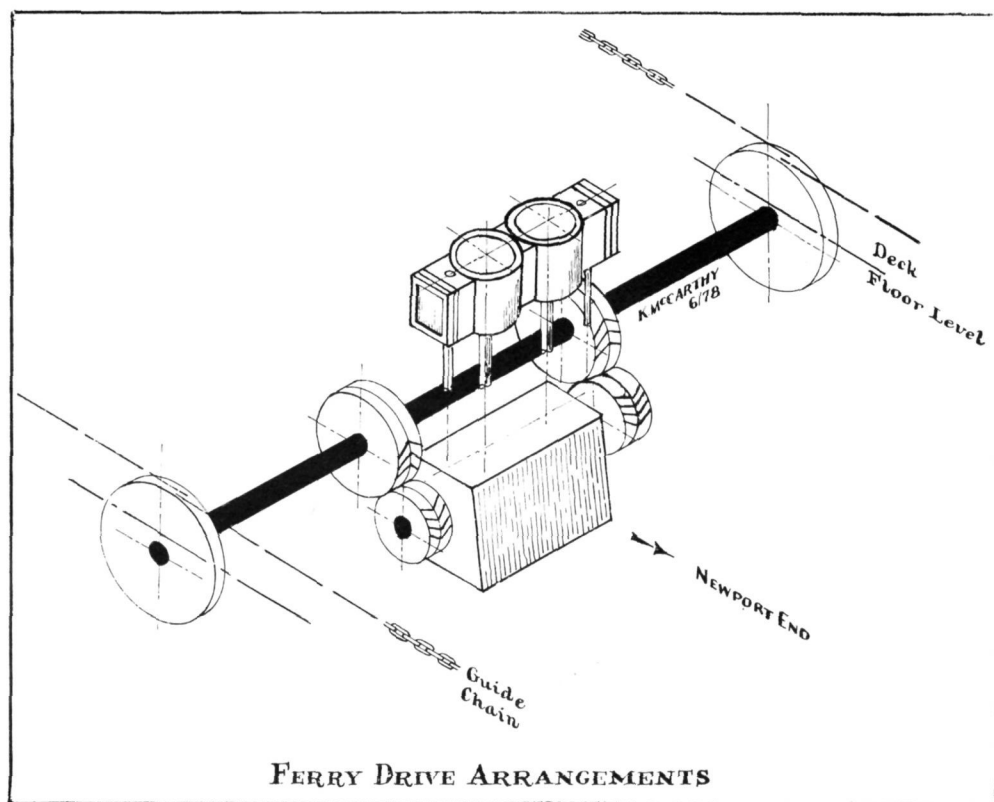
The older ferry operated just downstream from the planned slips of the newer vessel, and the older craft was experiencing trouble at this time. On March 3rd 1931 the chassis of a large motor lorry became embedded in the ferry ramp and traffic was held up for more than an hour until it was freed. On the morning of May 5th 1931 the service was again delayed for a half hour as a steam roller was unable to climb the ferry ramp due to its wheels slipping. This trouble was rectified by placing planks, taken from the new ferry slips, under the roller's wheels.

On Monday April 20th 1931, contractor C.D. Timms commenced construction on the new ferry approaches estimated to cost £10,000. This project would be completed in three months and was expected to give much needed employment to the men in the district seeking jobs.

The new ferry was towed from its construction slips to the new landings on November 16th 1931 and was tested on its chains on November 18th and 19th. Public service commenced on Tuesday November 24th and the Thompson's Engineering and Pipe Coy. was responsible for the operation during the first thirty days. The new vessel amounted to £35,377, £903 less than the contracted price, while the Council Engineer, Mr Cresswell, reported that the Melbourne Ports and Harbours Commission had been requested to allow the older ferry to remain in position for periods of light traffic. No doubt the economics of keeping two vessels in steam prevented this proposal from continuing for any length of time.

The fortunes of the Williamstown Council were at a low ebb at that period (details of which are outside the scope of this brief article) so the tunnel schemes of the 1930's were not carried out. So the steam ferry commissioned in 1931 provided the only lower river crossing until construction commenced on the Westgate Bridge in April 1968.

The writer was able to inspect the vehicular ferry in August 1972 when it was in the charge of Mr. Lou Withers. To operate the ferry he had to be in possession of a First Class Steam Ticket, and although the vessel could not be steered, Mr. Withers demonstrated how, by skillful use of the main steam valve and reversing lever, the craft could be manoeuvred on its chains so that the swift current would not force it against the wings of the slipway.



FERRY DRIVE ARRANGEMENTS

The single boiler was coal fired and supplied steam at 100 lbs/sq. in. to a two cylinder, double acting, vertical 80 hp steam engine. At each end of the crank shaft a double set of helical spur wheels meshed with mating larger diameter wheels on the transverse drive shaft. These elements were located as for a side paddle wheeler, but instead of the paddle wheels, the ferry was fitted with two large pulley wheels around which the two side chains were wound once.

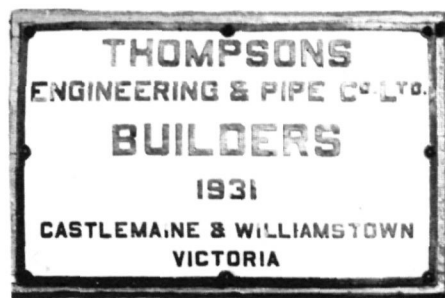
The traction chains were guided along the sides, but on top of the hull, by horizontal and vertical roller drums and the crowns of the main drive wheels projected above the deck road level. The Yarra, at the ferry crossing, was dredged to a depth of 45ft while the slack of the chain was adjusted so it dropped to 38ft. just clear of the muddy river bed.

Marks were painted on the fender wings of the slips to indicate when to turn off the steam and when to drop the small end deck lip into the loading position. Two "vee" shape brackets on each end of the hull engaged with the adjustable slip ramps to keep the road surface level with the deck while a pressure of 50 lb/sq.in. in the steam engine was used to hold the ferry against the ramps, against the Yarra currents and the wash of passing ships.

Each day the vessel was visited by Council

greasers while every few days a truck load of coal would be tipped on the deck roadway at the engine-room door from where it could be shovelled into the bunkers. For a few days each year the ferry would be disconnected from the chains and towed upstream for major maintenance.

The ferry was manned by a crew of three, a master, a boiler attendant and a deck hand. During 1972 the sign at the Williamstown side indicated that the first ferry each day departed at 6-15 am while the last was timed to leave at 8.25 pm. The last departure from the Port Melbourne side was announced as 8.35 pm. On the Port Melbourne side the timetable indicated that the first trip for the day departed at 6.15 am and the last at 8.35 pm,





ABOVE: Mr. Lou Withers at the controls of the steam ferry, 30 August 1972. Mr. Withers hand is on the main steam valve, the large lever at the left reversed and notched up the engine while the smaller lever on the steam valve pedestal was to operate the drain cocks on the steam cylinders. - K.McCarthy

RIGHT: Decimal and pre decimal tickets used on the Williamstown Short Road Ferry in September 1972 and January 1960.
- K.McCarthy Collection

PAGE 7: The large builders plate on the wall of the ferry deckhouse.
- K.McCarthy

Saturdays and Sundays inclusive. The craft was tied up at the Williamstown side each night.

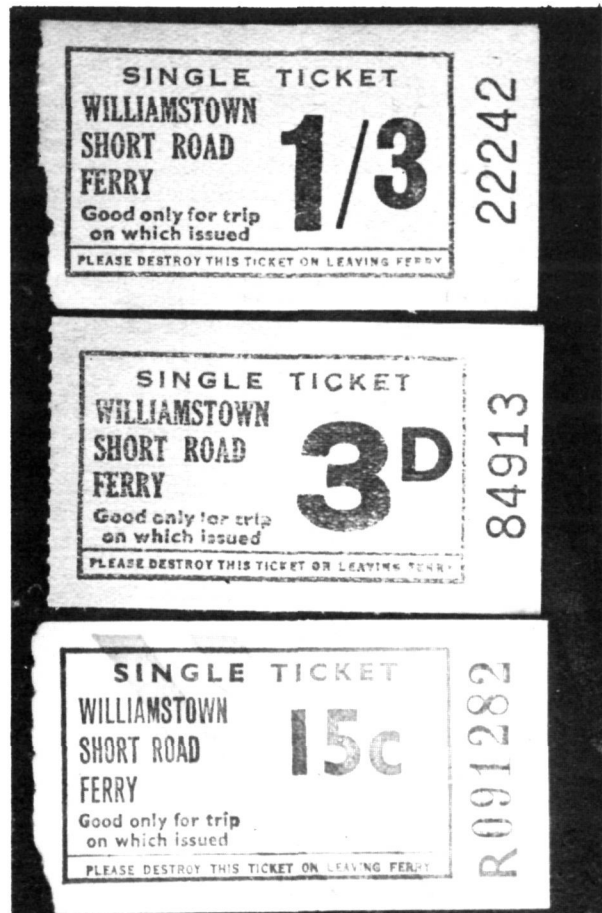
By pacing the ferry decks the length was found to be approximately 125ft., the width amounted to 45ft while the deck house covered an area of 62ft x 7ft. The displacement was thought to be 300 tons.

During August 1972, the ferry was said to have a working life of 17 months remaining. A later visit during Easter 1974 found the ferry moored out of use, possibly verifying the predicted life period. The writer has been unable to find a firm date for the last ferry trip, or if it was again in service later in 1974.

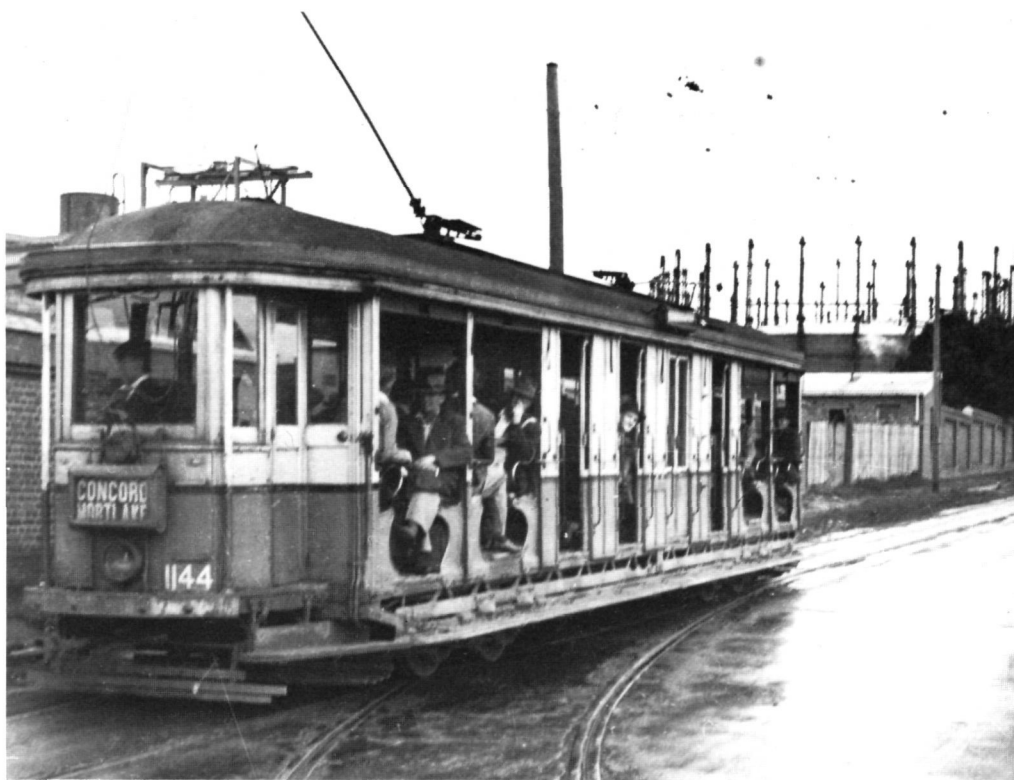
The operation of the vessel seemed to be of little interest to members of the Melbourne transport fraternity or to the local press.

During late 1972 the writer sent copies of "Trolley Wire" containing the Newcastle ferry story to Williamstown Council to substantiate readers' interest in ferries, while a request was made for details of the coaling methods as well as major sizes of the hull. Unfortunately this request was ignored. A search through "The Argus" indexes for 1931 in the N.S.W. Public Library in Sydney found the pages dealing with Williamstown Council, and only those pages complete, and what a scandal they revealed!! During 1931, if the press accounts can be relied upon, it appears that Williamstown civic affairs were a series of prosecutions, counter prosecutions, dismissals, disorders and irregularities so it seems that this period is one which Williamstown would rather forget!

In conclusion the writer thanks Messrs. L. Withers, B. Parle and F. Stamford for the valuable assistance given in the preparation of this brief article. It is hoped that some thoughts can be spared for the earlier forms of crossing the lower Yarra during the ephemeral celebrations of the opening of the Westgate Bridge.



ENFIELD REMEMBERED



O class car leaving Mortlake terminus at the gasworks change of shift, Saturday afternoon 21 August 1948, the last day of operation. Behind the gasworks wall a 3ft gauge steamworked railway was still fairly busy.- B.J.Parle

The tramways of New South Wales had many unusual or unique features, not the least being the isolated systems and lines that were operated with one fleet of rolling stock in both steam and electric days.

Only two street tramways were privately built and operated and one, from Rockdale to Brighton-Le-Sands, originally steam but electrified on the three wire system with two overhead conductors, passed to the Government after 30 years. The other at Parramatta remained steam operated and in private hands until it closed in 1943. It crossed a later Government line at Parramatta and railways around Camellia and Sandown but had no connections.

The Government built lines in Newcastle, Maitland and Broken Hill, all well away from Sydney but even in Sydney there existed at various times ten independent lines or groups of lines. Two of

these, the initial Newtown area steam lines and the King Street cable line and its electric extension were later incorporated into the main system. The three isolated systems that were electrified were in themselves larger than many other Australian systems. It is one of these, that based on Enfield in the Western Suburbs that we now pause to remember as thirty years have elapsed since it was closed on 21 August 1948.

The first isolated suburban system opened was from Kogarah to Sans Souci on 9 September 1887. This was built to railway track standards and was in fact initially operated as a light railway. It operated a freight service using railway vehicles. This was followed by a line from Ashfield to Burwood Road Enfield which was entirely different in character. Built to street tramway standards it started in Liverpool Road (Hume Highway) around the corner from the railway station and was purely a feeder



O class sar 1051 has just rounded the terminal balloon loop at Cabarita and is ready for the return trip to Ashfield on the last day of service, 21 August 1948.

Even in those far off days there was always some one to get in the way!

- B.J.Parle

to the railway from an area which showed development promise. Initial rolling stock deliveries were by road. The line was extended to Ashfield station with a connection into the goods yard (for rolling stock transfer only) on 15 September 1899.

In 1901 a major extension was built from Enfield to Burwood and Mortlake on the Parramatta River, a total distance of 7½ miles from Ashfield; this extension was more than double the original mileage. To operate the enlarged system a larger depot was built to replace the original one which was situated on Tangarra Street at Burwood Road, Enfield. The new one was sited at the western end of Tangarra Street in Punchbowl Road (now Coronation Parade). The extension opened on 16 September 1901. A branch from Concord to Cabarita was opened on 31 July 1907. A rambling system resulted from these extensions and with little prospect of through traffic it was initially operated as three feeders to the railway; from Enfield to Ashfield, from Enfield to Burwood and from Mortlake to Burwood. The lines were never profitable, with the heaviest traffic being to the riverside at Mortlake and Cabarita.

The system was, however, electrified and electric operation commenced on 4 February 1912. Originally single track, the line from Ashfield to Cabarita Junction, Concord was duplicated. There was a balloon loop at Cabarita as prior to the second World War rowing events were held on the river and large return crowds had to be handled. A perway siding was constructed at Mortlake, but saw little use as such.

The Enfield system settled down to the uneventual routine of any suburban tramway. The main event of note occurred on 11 November 1907 when the boiler of steam motor 82A exploded as it was crossing another tram, headed by 25A, at the Stanley Street Loop in Burwood Road. Both drivers were killed. It also periodically came to notice when the many schemes for connecting it to various nearby lines on the main system were aired. None of these showed any promise of improving finances and in fact generally were considered likely to worsen the position. However the difficulties of rolling stock transfers and the necessity to keep a large fleet at Enfield to meet summer weekend peaks do not appear to have been taken into

consideration when arriving at costs.

Rolling stock was exchanged between the various systems and returned to Randwick Workshops for overhaul from time to time. This was effected over the railway system in both steam and electric days until 1937, when with the closure of the Kogarah system steam motors were no longer readily available for motive power, when a large road trailer, on to which the cars could be driven, known as the Lizard was introduced.

Standard 70 seat trailers were used in steam days. With electrification a new 5 track depot was built in Tangarra Street and a fleet of the then new 80 seat multiple unit O cars introduced; a luxury for such a backwater system. The O cars ruled until closure when 29 were attached to the depot. In 1914, L 348 was tried but was found to be too slow, causing delays to the following O cars, although if the fleet had been changed entirely longer running times would have overcome this problem. Not until a few years before closure did any other intrusions appear, this time in the form of N 707 and 708 which remained until the end. In steam days a former cable trailer was used as a breakdown car

and it is possible that a D car was also used as a trailer for a short time as happened elsewhere before they equipped for electric operation. An SV ballast trailer, a W sprinkler, a C breakdown and D scrubber were allocated to the line. The SV and W being sent away long before closure. It also appears likely that an X sprinkler was allocated to the line in steam days. There is some evidence, as yet inconclusive, that OP 1089 operated on the system for a short time.

The line was closed in 1948 due to the run down condition of the tracks and the plant generally. This decision was fought by local interests but to no avail. It was stated that the closure did not represent a general tramway abandonment policy; a statement that was to be proved false in a very short time.

The bus replacement services initially operated from Burwood depot but with the conversion of the Enfield Depot for buses the services reverted there. And so it remains to this day. It is small by Sydney standards, as it was in tram days. Besides running routes 420, 421 and 466 as the tramway replacements it also provides buses for 480 and 483 Central to Strathfield and 415 Summer Hill to Strathfield.



Enfield Depot 30 years after is still recognisable as a former tram depot, although it is now in much better repair. The SPER Leyland Halfcab pauses for photos during a tour of the former Enfield system on Sunday 20 1978.

SUTHERLAND TRAMWAY DEPOT

THE CLOSURE, AUGUST 1935

By K. McCarthy

The Loftus depot of the Sydney Tramway Museum is not the first tramway shed to be erected in the Sutherland Shire. Just one mile north of the museum, adjacent to the location where the Cronulla railway bridge now spans the old Princes Highway, the N.S.W.G.T. Sutherland depot stood, from 1911 until 1935. Just over twenty years were to pass, until March 1956, when the nucleus of the S.P.E.R. tramway collection arrived on the Sutherland Shire to start a second tramway.

The Sutherland steam tramway depot consisted of two wooden framed sheds clad with galvanized iron. The trailer shed consisted of two roads, while the adjacent motor shed to the west, covered only a single track. The depot stood at the southern end of Sutherland goods yard, just to the north of the present railway sub station erected in 1926.

The Tramway Department originally planned to erect the motor shed at the proposed terminus of the Cronulla tramway at the corner of the Kingsway and Curranulla St. On July 4th 1910, however, during the initial construction stages, the decision was reached to extend the proposed tramway through Cronulla, for 76 chains to Shelly Beach Park. As early as April 1909 the Running Inspector had suggested that the mistake made at Sans Souci should not be repeated and the motor shed should be constructed next to the proposed trailer depot at Sutherland. This would cut down on the cartage distance of fuel, and would also shorten the travelling distance of the maintenance crew from Newtown Depot when they visited the system.

Prior to the opening of the Sutherland to Cronulla tramway to the public on June 12th, 1911, the Chief Engineer made a private inspection trip along the route on June 1st when a motor hauled the inspection party in a trailer pulling a railway goods waggon (possibly a coupling dummy car) at the rear. The official inspection took place on June 6th, when motor 124A hauling trailer 92B departed from Sutherland Station at 9-15am. Photos of this trial trip have erroneously been used over the years as the first regular public trip which departed from Sutherland during the early hours of June 12th.

The tramway passenger service closed on August 3rd 1931 due to poor financial results aggravated by private bus competition. When the Sutherland Shire council financed the construction of the Tom Ugly's Bridge which opened in 1929, this cleared

the way for "short cut" bus competition directly to Cronulla from the southern Sydney suburbs.

The tramway remained in use for goods service, operated Mondays, Wednesdays and Fridays, until February 13th 1932 when this service ceased. Steam trams on the railway branch lines at Camden, Toronto, Morpeth were fitted with coarse railway flanges while steam rolling stock on the street tramways of Kogarah and Sutherland (as well as the early stages at Rockdale and Manly) were also constructed to coarse track standards. This enabled railway goods waggons to be hauled along the Sutherland tramway to freight sidings along the route. Special four wheel railway flat trucks, known as "coupling dummy trucks" were used to enable the low link and pin draw gear of the steam motors to be linked with the hook and chain couplings of railway rolling stock.

Two further tram trips were made along the Cronulla tramway after February 1932 and these operations are the subject of this brief article.

On December 30th 1931 the District Tramway Inspector informed the Chief Tramway Traffic Manager that as staff would not be required at Sutherland depot after February 1932, two trailer cars should be sent to Arncliffe Depot, closed on December 30th 1926, to enable all the Sutherland rolling stock to be housed under cover, behind securely locked doors. A sprinkler system was not provided in Sutherland Depot, but fire hydrants were available in the sheds, so the supply tank would have to be filled and the station staff at Sutherland requested to keep the building under surveillance.

On February 13th 1932 motors 5A, 31A, 83A, 121A, 126A and 129A, trailer cars 30B, 55B, 60B, 101B, 102B, 108B, 113B, 115B, 130B, 136B, 142B, 98B, 131B, 197B, 66B, 187B with water tank car 36"S" and coupling dummy cars 61"S", 62"S" and 63"S" were housed at Sutherland depot, 26 items in all.

During September 1932 the Department of Road Transport and Tramways received two requests for the lease of Sutherland shed for manufacturing purposes. By this stage (Sept. 16th) the rolling stock had only fallen to 5 motors, 16 cars and the 4 service vehicles. Mr Timmory, the then Acting Tramway Traffic Manager, suggested to the Secretary that if the leasing of the premises was



Sutherland Depot prior to the railway electrification of the 1920's. The high fire hydrant tank and the lower steam motor reservoir can be seen. The motor shed is located behind the tank stands while a NSWGR S truck, of the now rare all steel variety, stands adjacent to the fuel stage. The Princes Highway now passes through this site rising out of a cutting under the Cronulla railway line. Only the western wall of the motor shed pit now remains to indicate the existence of this depot. - Late G.Barnidge Collection

contemplated the rolling stock could be hauled to the Wolli Creek Per-Way Yards on the main system where the trailers could be refitted with wheel sets of tramway flange profile and the motors placed on the special transfer bogies and taken to Leichhardt Depot for storage.

The lease of the shed was not approved, but the sale of trailers commenced during 1932. Archives reveal that the cars were sold for £10 each, the bogies and some brake gear components being

retained as spares for the Kogarah trams. Buyers wishing to inspect the tramcars had to make appointments so that the shed could be opened, while on the day of delivery, a party of tramway employees had to be available to release the bogies from the trams. On October 31st 1932 a Mr. Bromley of Kensington had paid for car 136B, but decided to take 142B instead, the delivery being carried out on November 5th. By November 25th a Mr. Scrovich had reserved 101B and 102B, but he

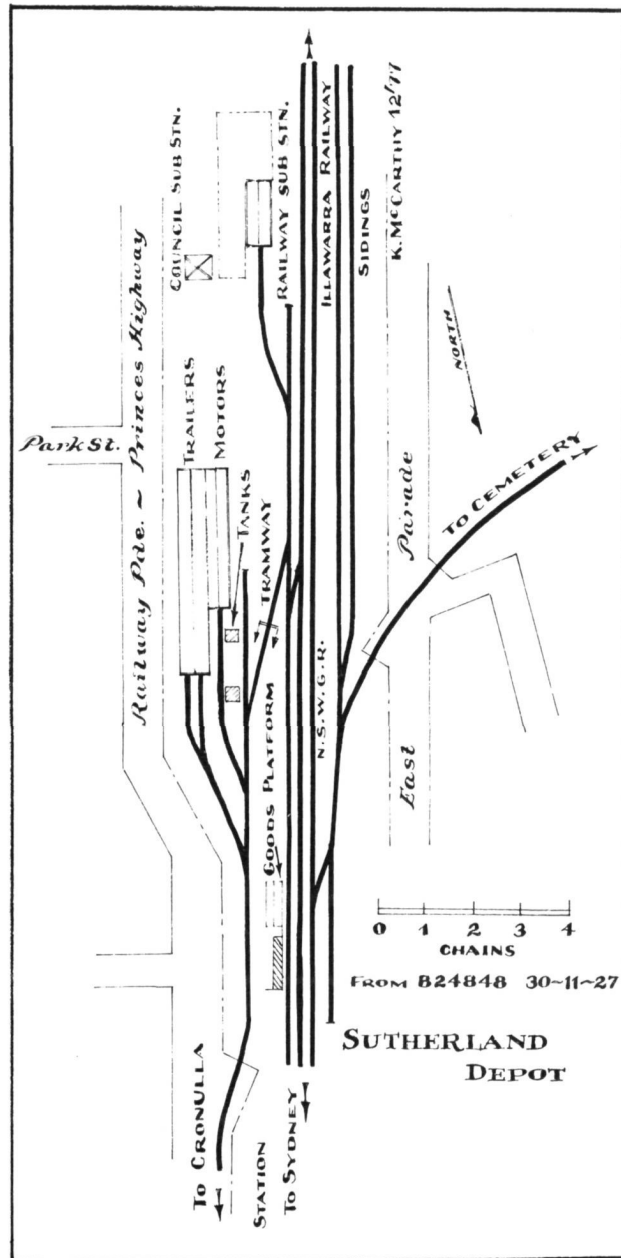
did not take delivery. On January 30th 1933 Mr Wright of Cronulla selected 115B and took delivery on February 3rd while Mr Wilshire purchased 131B on March 27th, this being carted away from the depot on March 30th.

By July 28th 1933 motors 83A, 121A and 126A together with trailers 30B, 55B, 60B, 66B, 98B, 102B, 108B, 113B, 130B, 187B and 191B and cars 36"S", 61"S", 62"S" and 63"S" were still at Sutherland while car 101B, without any glass, stood in the depot yard. A total of 19 vehicles. It should be noted that car 191B was not at Sutherland in February 1932. Coupling waggon 63"S" was at this stage loaded with three 400 gallon cube tanks retrieved from locations along the line while the 8 bogies from the four cars sold up to that date were on the premises. For two months after the closure, car 113B had stood in the depot yard, but this was placed in the motor shed on April 18th 1932.

Two elevated tanks stood outside Sutherland depot. The larger, of 10,000 gallons capacity, supplied the four depot fire fighting hydrants, while a smaller, lower tank, was used to fill the steam tram motors. The only reticulated water supply to the district during the tramway era was a pipe line laid by the Tramway Department in March 1911 from Hurstville, under Georges River, to an elevated tank at Miranda from which two water cranes replenished the tramway steam motors. Several homes along this pipe line were able to connect to the supply, but when the supply to Miranda was reduced to a trickle during hot weather, these private services were quickly disconnected from the main.

A large underground cistern or tank was excavated at Sutherland depot and the water tram regularly delivered water from Miranda to this cistern from where a steam pump, connected by a temporary line to the steam tram's boiler, lifted the water to the elevated tanks. Archive correspondence of April 29th 1910 directed that water tram 37"S" should be overhauled and transferred to the Sutherland line, but this was forwarded to the Newcastle tramways. A later file dated June 7th 1911 reveals that tank car 36"S", recently received at Randwick Workshops from the Baulkham Hills line was being sent to Sutherland and this tram remained there for the rest of its days.

After the closure of the tramway the ball valve on the Miranda tank was damaged, but this was repaired and a steam motor hauled tank car 36"S" to Miranda on April 18th 1932 and on its return to Sutherland refilled the tanks. The authorities hoped that the slow rate of evaporation during the winter months would ensure that adequate water remained in the depot tanks for fire fighting purposes until the summer of 1932-33. An inspection conducted



in early June 1932, however, revealed that only 3 tons of coal remained on the fuel stage at Sutherland from a heap which amounted to 5 tons in February, while the levels in the water tanks had fallen. The local police officer was requested to keep the depot under close surveillance.

This fall in the water levels was due to a forgotten connection made in 1926 to the nearby railway sub-station. On July 1st 1932 a Kogarah steam motor

and crew visited Sutherland and again hauled the water tank car 36"S" to Miranda on water duty enabling the tanks and cistern at Sutherland to be replenished. At the same time the steam motors in the depot had their bunkers filled from the fast diminishing coal pile so that fuel would be available when the time arrived for their transfer to Sydney.

On July 11th 1932, the Archives reveal, 6 motors and 15 cars were still stationed at Sutherland depot.

Another problem, which now appeared, came from the condition of the track in Sutherland. The Shire Clerk addressed a complaint to the Tramway Department that many bicycle riders were being thrown from their cycles when crossing the raised check rails on the curve outside the Council Chambers. A spot check by tramway inspectors found this complaint to be justified. The Per-Way Dept. agreed to cover the street tracks in Sutherland with "maggie" gravel, but this would prevent further visits of the water tram to Miranda.

At this stage, July 1932, the pipe line from the Woronora water scheme had just been constructed through Sutherland and the Railway Department was making a connection to the main to supply the railway station and the electric sub station. The Tramway Department decided to have a 1" diameter pipe connected to the large elevated tank, thus the need for the water tram passed.

During August 1934 the Department of Main Roads requested that the Sutherland tram shed be demolished to enable the highway to be returned to its original straight alignment. The Tramways Department calculated the cost of removing the depot as £238, so on May 29th 1935 the land for the new alignment was offered to the D.M.R. for £452-8s-9d.

On February 11th 1935, 6 trailers, 3 coupling dummy trucks and the water tram were still stabled

at Sutherland. Mr. Edwards, the Tramway Engineer suggested that all the bogie wheels should be sent to Kogarah and any trailer cars not sold should have their glass and cedar panels removed, and the skeleton burnt at the depot. The scrap value of the coupling dummy cars, which could be taken to Randwick Workshops, would amount to £13 each.

The water car, 36"S" was dismantled at Sutherland depot on August 2nd 1935 and a final letter dated August 26th 1935 from the Tramway Department to the Secretary of the N.S.W.G.R. reported that the tram shed at Sutherland had been demolished and all the rolling stock disposed except for the three coupling dummy waggons which were offered to the Railway Department. Official lists reveal that 61"S" was scrapped on January 30th 1936, 62"S" on October 18th 1937 and 63"S" on January 30th 1936.

The realigned Highway of 1935 passed through the Sutherland depot building site. This was again diverted in 1937-8 to enable the construction of the Cronulla railway overbridge to proceed. The Highway was lowered at this point revealing the wall of the depot inspection pit. This piece of industrial archaeology can still be seen on the western cutting wall of the road underpass.

The way now seems clear for an early start to be made on the relocation of the Tramway Museum depot to the new site adjacent to Loftus station. A joint Tramway Trust may be formed in conjunction with the Sutherland Shire Council and this group will be responsible for the construction of the museum tramway towards Sutherland along the western side of the old Princes Highway. The northern terminus of this tramway will be adjacent to the Sutherland electric railway sub station near the site of the old Sutherland steam tram depot.

ALTERATIONS & ADDITIONS

CREDITS: From Tramway Trust To National Trust which appeared in the April 1978 issue was by R.E.Green.

Adelaide Tramway Centenary - The notes on moving the trams from St. Kilda were supplied by John Radcliffe, whilst the celebrations were covered by Vic Solomons, Mal McAulay, Dick Hall and Brian Muston.

The photo of A 1 at Glenelg on page 36 of the August 1978 issue was by John Radcliffe, despite the fact that he is in the photo. The lower one on the same page of the triple track at Burwood was by Keith Kings.

A number of readers have questioned the wheel arrangement of the T class steam loco quoted on page 19 of the June issue as a 4-8-9. They have suggested that it surely should have an even number of wheels, in which case it is probably a 4-8-8 or even an 4-8-10. The editor is sorry to have to report that it is nothing more exotic than a 4-8-0.

BUS STOP in the April 1978 issue quoted route 125 Lidcombe - Bankstown as going to West Bankstown Bus Service along with route 27 Bankstown - Strathfield. It has in fact gone to Bankstown Bus Lines which took over the majority of the former McVicar's routes. Route 27 still operates in the McVicar red and cream under the name Bankstown - Strathfield Bus Service.

HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

WALKA WATER WORKS-MAITLAND N.S.W.

In the February 1976 edition of this magazine, brief details were published of the Newcastle Historical Vehicles Association success in obtaining the body of LP 327 from a farm at Duri, near Tamworth N.S.W., and its return to Newcastle where it was previously available for public service from July 1924 until the closure in June 1950. Since then the small group in the Hunter Valley have experienced some failures and successes, and have now come into possession of the area adjacent to the old Walka Water Works pumping station at Maitland N.S.W. as a site on which their transport museum can be established.

The Walka Water Works were established at Oakhampton, upstream from Maitland, by the Hunter District Water Board to provide water for a reticulation network in the city of Newcastle. The site on the Hunter River was selected at a point above the effects of salt water and above the major urban areas of the lower end of the river valley. During December 1885 the first water arrived by

pipeline in Newcastle provided by four temporary pumps coupled to a Tange engine, but on January 6th 1887 the initial permanent pumps and beam engines located in the ornate engine house, which still stands at Oakhampton, were tested and by the end of that month these units had taken over the supply from the temporary apparatus.

Three massive beam engines were used at Walka, supplied by James Watt & Coy. of Birmingham, England, each fitted with large flywheels weighing 36 tons each. The majestic engines worked at 14 r.p.m. powering pumps connected by rods to both ends of the beam, and capable of delivering 100,000 gallons of water per hour. The water works pumped water from the Hunter to a storage lagoon, then lifted the fluid through filter beds and settling tanks followed by a rise of 270 feet through a 5½ mile main to the main holding reservoir at Buttai located about 2 miles south of East Maitland. From this reservoir the water gravitated to service tanks around Newcastle. Thus all Newcastle water had to be pumped from the Hunter. Sydney, on the other hand, has received gravitated water to the main



The boiler and pump house at the Walka Water Works, Oakhampton, circa 1905. The settling reservoir can be seen in the foreground. - K.Magor Collection



W3 668 and R1 1884 at the Walka Water Works siding, January 1978.

Prospect and Potts Hill holding reservoirs, since 1886 when the first stage of the upper Nepean scheme was opened, replacing the old Lachlan Swamps supply at Botany.

In 1923 the Chichester Dam was connected to Newcastle reducing the importance of the Walka scheme and after 1931 the plant was steamed for testing to be available for emergency services. Mr J. Armstrong in his book "Pipelines and People" states that the plant was brought into use on 14 occasions between 1931 and 1945, the last steam trials being conducted on August 2nd and 10th 1945. The Museum of Applied Arts and Sciences was unable to take up the Board's offer to preserve one of the three beam engines and the plant was broken up for scrap in 1951.

During 1951 the Water Board leased part of the Walka property to the Electricity Commission for a period of 30 years to enable a package type power station to be erected to help overcome the state's chronic power shortage due to the inability to commission new plant during World War II and the immediate post war period. This power house is being demolished at present and when the scrap dealers move off the site the NHVA will be able to develop the water works area into a transport museum.

The initiation of a museum project is never easy, but this Newcastle group has suffered a fair share of difficulties. After the initial success of taking deliv-

ery of LP 327 in October 1975 at the temporary site at Tighes Hill Technical College, the society obtained promises, and in some cases, titles to many interesting transport relics. These included a Vampire air craft, a Matilda army tank, old army lorries and equipment, as well as several single and double decker buses. Many of these had to be surrendered when a suitable museum site could not be obtained in Newcastle and vandals started to take their toll on items stored on temporary locations in the district.

By May 1976 the whole future of the society seemed in the balance until their search horizons were lifted to other portions of the Hunter Valley. The first hopeful sign appeared when it seemed that the abandoned portion of the South Maitland Railway Coy's. tracks from Bellbird Junction to Cessnock may have been available for lease. The large station buildings at Cessnock, however, had been demolished a short time before.

Success was achieved in 1977 when the Hunter District Water Board granted the NHVA a provisional lease of the Walka Water Works railway sidings on which some tramcars could be stored pending a firm lease of the site after the completion of the power house demolition task.

The first item was delivered to the museum site on 6 August 1977 when Melbourne tramcar W3 668 was lowered onto the tracks. This was exactly 50 years to the month after the last trams had left the

former N.S.W.G.T. Maitland steam tramway. The Maitland tramways closed on 31 December 1926 and the four steam motors and seven trailer cars steamed out of East Maitland Depot along the railway connection to Newcastle on Sunday 2 January 1927. On 9 January 1927, however, one steam motor and four ballast truck trailers were transferred from Newcastle to Maitland by the Tramway Engineer's Dept. to commence track lifting. Driver Carter and cleaners Clark and Lamb were attached to Maitland depot for this project, the latter two being replaced by Messrs. Gulliver and Hills (former Maitland conductors) after February 1927.

This task was completed by August 1927 and on 18 August the water, gas and sanitary services at Maitland depot were disconnected. The toilet and office blocks were removed by the Railway Department and on 24 September the steam motor and four ballast trailers were transferred back to Newcastle being stored, by that time, on the railway-

tramway connecting sidings off Day Street East Maitland.

The Melbourne tram's stay at Maitland was brief, for during September it appeared on display at the Kloster-Ford car sale yard at Hamilton, Newcastle with the society's double decker bus M/O 2730 as a sales promotion display. Tram 668's stay in Hamilton was of short duration as it was back at the Maitland museum site by the start of October 1977.

A second tram arrived at Maitland on Friday 18 November 1977. This was the body of former Sydney tramcar 1884 which had been used as a children's play room at the Dalmar Children's Home at Carlingford for 17 years.

By January 1978 the Sydney R car and the Melbourne W3 were standing side by side at the crossover on the Walka railway siding, which, in the Water Works grounds area is paved with a tarred road surface.

TRAMS RETURN TO PORT KEMBLA

Trolley Wire for October 1966 briefly outlined the operation of the electric railways, which serviced the Electrolytic Refining and Smelting Co., Australian Fertilisers and Metal Manufacturers plants at Darcy Street Port Kembla between 1908 - 1952 (2ft gauge) and 1927 - 1956 (4'8½in gauge). Both systems received power from overhead trolley wires and trolley poles, while the standard gauge lines were worked by three former Sydney D class tramcars converted to steeple cab locomotives.

On Saturday 30 September and Monday 2 October 1978 a tramcar of a different design again took to the rails at Port Kembla. On these two days the 2ft gauge half size birney car, constructed by Richard Youl traversed street

track along Fitzwilliam Street Port Kembla linking the main Wentworth Street corner with Kembla Street.

This was the occasion of the 'Put Into Port' festival, the tram being used to carry passengers between the main street, the venue of the much publicised Billycart Derby and the Uniting Church Hall where a model railway exhibition was held.

The SPER 1937 Leyland Tiger half cab bus was also in Port Kembla for the festival and operated between the town and the harbour on the Monday.

So, after an absence of over 17 years, a tram appeared carrying passengers along a public street in New South Wales.

2ft gauge Birney at Port Kembla - K.McCarthy



CITY SECTION

News of the Melbourne and Metropolitan Tramways Board

Work progressed well with the relaying of the East Kew line outside the Kew Cemetery, between Adeney and Ridgeway Avenues, a distance of about half a mile. Commencing on 12 July the southern (or inbound) track was completed by mid August, using temporary track against the southern curb. The outbound track was then connected to the new track, thus making a double slewing of the tracks. The second new track was completed and brought into use on 11 September, with the inbound track being connected two days later. Another section of Swanston Street was re-railed and concreted between 12 and 15 September, being the south-bound track between Collins Street and Flinders Lane. In South Melbourne, Eastern Road has finally been widened by the Council, thus placing the tram tracks off centre. Track lights have been placed in the overhead along Church Street Richmond, between Bridge Road and Swan Street. Further landscaping work has been carried out on the East Burwood route, between Parer Street and Station Street.

No Z class trams have entered service for several weeks, since 97 on 19 July. The former freight car 17W has been reconverted to an

open toastrack tram and was being painted during September.

On Monday 19 June the Essendon Airport line service was halted when a twin engined light aircraft failed after take off and crashed through the overhead wires. The plane crossed Matthews Avenue and crashed into houses killing six people. An approaching tram missed the accident by several seconds. Temporary repairs were made to the overhead the next day. Four of the pop art decorated trams are now in service, with the other two being painted. They seem to have received a mixed reception from the public, varying from blissful approval to dumbfounded stares!

The order for 100 Volvo buses with Ansair bodies was completed by mid September. Some are to be used for new services across the Westgate bridge when it opens later this year. To this end 940 and 945 to 949 have entered service from Footscray Depot. When the Premier Mr. R. Hamer, brought down the budget in State Parliament in mid September, provision was made for the purchase of another 200 buses for the M&MTB in successive years.

Z 69 City bound in Nicholson Street Fitzroy, looking southwards from Westgarth Street on 27 May 1978. The concrete kerbing on the left of the tracks was installed in 1977 and the jiggle bars on the right were a later installation in 1978. - K.S.Kings



THE SYDNEY SCENE

Transport News from the Sydney Region

State Election

The election for the New South Parliament on 7 October 1978 saw the Labour Government returned with a greatly increased majority. The campaign was mainly one of non-issues with transport being relegated to minor importance.

The Liberal and Country Parties continued their basically anti public transport attitude with promises to abolish road maintenance tax and thus effectively subsidise road hauliers and to recommence and vigorously push the inner metropolitan freeway programme.

The Labour Party promised continuation of the railway rehabilitation programme and the electrification of the lines from Gosford to Newcastle and Muswellbrook, Waterfall to Wollongong and Port Kembla and Campbelltown south to Goulburn, to be financed by profits from the sale of coal by the Electricity Commission.

Export coal would be the main commodity to benefit from these projects and to this end the Moss Vale to Unanderra and Port Kembla line could be expected to be included.

There has been speculation that future long distance electrification could use AC. It is now a matter of wait and see.

It is interesting that no extension to the western line electrification is planned. This was originally to have gone to Wallerawang but stopped at Lithgow/Bowenfels. Although some coal comes from Wallerawang most originates within the electrified area. There is heavy coal traffic at present from Gulgong, which is often diesel worked throughout to Port Kembla but which will disappear when part of the long projected and partly built, but pulled up, Sandy Hollow to Maryvale line is finally built. This will feed the Gulgong coal traffic into the projected Muswellbrook electrification.

The PTC had previously appointed a project manager and allocated an initial \$500 000 for planning for the Gosford to Newcastle electrification whilst work has commenced on the Illawarra line Loftus to Waterfall.

Railways

ALONG THE LINE: A facing crossover has been installed at the down end of Lawson station on the western line to facilitate single line working during track upgrading. A similar crossing has been installed near Wondabyne on the north line. Ballast cleaning and associated work con-

tinued on both the western and northern lines and in the metropolitan area during winter. This work will slow down during summer due to problems with rail stress during the hottest weather. Four ballast cleaning machines are presently in use with another yet to be delivered.

The down relief line between West Ryde and Epping has been laid and connected and was being wired in early October. The terminal track at Epping has been disconnected for rebuilding into a down through line. This track has platform faces on both sides but that on the up side has been cut back and fenced whilst the down side face is being rebuilt to current standards.

The second of ten steel box girders for the new Parramatta River bridge at Meadowbank has been delivered but not yet placed.

The major resignalling of the Sydney area is nearing completion although the first of the four stage changeover scheduled for 22 October has been postponed till a date to be fixed and the final completion will probably now be well into 1979. Four existing signalboxes, West, East, Wells Street and Illawarra Junction will be replaced by one computerised control centre.

New overhead structures have been erected between Merrylands and Liverpool except at stations. Like those newly erected between Lidcombe and Regents Park they stand awaiting wires. Structures are also rapidly appearing on the Illawarra line southwards from Loftus.

EASTERN SUBURBS: Work is rapidly drawing to a close on this line although there are indications that the signalling work is behind schedule. The tracks are being cleaned to remove mill scale and corrugations. (See later) The last section of overhead, the link to the Illawarra line at Erskineville, was put in hand on Monday 16 October.

A four car double deck set was loco hauled to Bondi Junction on Wednesday 9 August. The first members of the public travelled over the line on Sunday 15 October in the first two of a number of pre opening specials which are to be in October, November and December. As with all trains on the line to date, except some short wiring trains which have been powered by AL 21, these were hauled by 73 class locos. For the first time non double deck passenger stock in the form of a six car end platform set appeared.

ROLLING STOCK: Fifty further double deck suburban cars, 25 motors and 25 driving trailers have been ordered from Commonwealth Engineering. Initial deliveries of the 150 cars on order from Goninan's in Newcastle are not expected before December. When complete these orders will bring the suburban double deck fleet to 643 cars, made up of:

Motors	291
Trailers	257
Driving Trailers	95

63 trailers are used with single deck motors, 25 in M sets, hand worked doors and 32 volt control and 38 in W sets with 1955 type motor cars. The first 10 driving trailers are not at present used as such due to an industrial dispute. The four prototype motor cars are to be converted to trailers and three cars are out of use due to extensive fire damage. These are C3825, C3877 and D4017. It had been expected that these vehicles would be scrapped, however 3825 has recently been moved back to Elcar from the Apprentice Training School where it had languished for some years.

The order for 16 double deck interurban motor cars and 15 driving trailers has been completed. This brings the fleet up to 46 cars, one of the original motors being destroyed at Glenbrook. A number of the older cars have been converted to run with the new batch but consideration is being given to converting the motors to driving trailers.

Suburban double deck trailer T4963 was outshopped from Commonwealth Engineering on 1 September 1978. This car is equipped with experimental lightweight fabricated bogies. These are a hornwayless design with the axleboxes supported by trailing arms with coil springs dampened by shock absorbers on the outer ends of the arms. Secondary suspension is by direct mounted air bags. Girling disk brakes are fitted, the disks being bolted directly to both faces of the wheel web. Each pair of calipers is actuated by an automotive type air cylinder mounted between and slightly below the axles. The design is being developed for use with new loco hauled stock.

1955 type motor car 3739 has joined 3737 and 3738 at Elcar to be stripped for spares. The three cars are to be converted to trailers to run with the 32 volt control stock. Due to the present acute shortage of suburban stock, which will be aggravated when the ESR opens, scrapping of the older stock has practically ceased. These single deck trains are still much in evidence in the off peak, with 6 and 7 car sets being noted. Some of these latter formations have four motors and three trailers, the reverse of the usual composition. This indicates a shortage of trailers and hence the conversion of the 1955 type motors.

The Elcar pilot (shunter), C3591, formerly 1921 type motor car C3082, re-emerged in August after an overhaul. It has been repainted in the new red scheme with the addition of yellow stripes on the sides and zebra stripes on the ends. It appears that a four motor replacement is a long time off.

A new wiring train has been built at Elstan (Eveleigh) Carriage Works. To be known as no 4 train it has been converted from four R and L type cars and two EHO brakevans. At the time of writing it has not gone into service.

The first of the new 80 class diesel locos, 8001, finally appeared from Commonwealth Engineering on 17 October 1978 after being handed over on 9 August. Although further members of this class can be seen in the factory yard, there is no sign of the long awaited 85 class electric locomotives.

The Sydney area is accustomed to seeing locomotives and rolling stock destined for interstate and even overseas systems. However the arrival of a locomotive from overseas is most unusual, therefore the arrival of *Pendennis Castle* from Britian, en route to Dampier created immense interest, even among those who are not steam fanatics. Another unusual vehicle to make an appearance was a Plasser Track Recording Car, similar to the PTC's RVX 3, before being despatched to Mt. Newman.

Experimental Bogie fitted to T4963.



Return To Service

As outlined on page 2 of this issue, the Public Transport Commission is using the SPER D scrubber, 134s to clean the rails on the Eastern Suburbs Railway. The background to this is detailed in Museum Notes & News on page 25.

The scrubber is self contained, obtaining power from a Fiat/McFarlane 415 volt AC, 3 phase, 125 KVA motor alternator set mounted on a 4 wheel flat truck coupled to the Erskineville end of the car. This supplies a bridge rectifier, made up from six WB&S 300 amp silicon diodes, of 500 amp continuous rating, with a 6000 amp short circuit capacity, mounted on the tram which supplies 560 volts DC to the two GE275 traction motors. These have a combined continuous rating of 110 amps. The all up weight of the power unit and flat truck is 5 tons.

After unloading on the Up Illawarra Relief at Erskineville (this becomes the Down Eastern Suburbs at Central) on Friday 13 October 1978, the braking, starting and climbing performance of the unit was tested on the 1:32 grade down to the tunnel mouth. It then ran to Redfern station (lower level, still under construction) to fill the water tanks. Further performance tests were then conducted on the long 1:200 back towards the Erskineville portal. Following this a new set of brake shoes was fitted, replacing those borrowed from other cars at Loftus.

On Saturday 14 October, the car ran to Central and successfully negotiated the pointwork of the turnback siding using the specially manufactured plates. Thus a tram returned to that part of Chalmers Street, although at a much lower level, from which they were banished in 1948 to enable construction of the ESR to commence. The scrubbing blocks were then



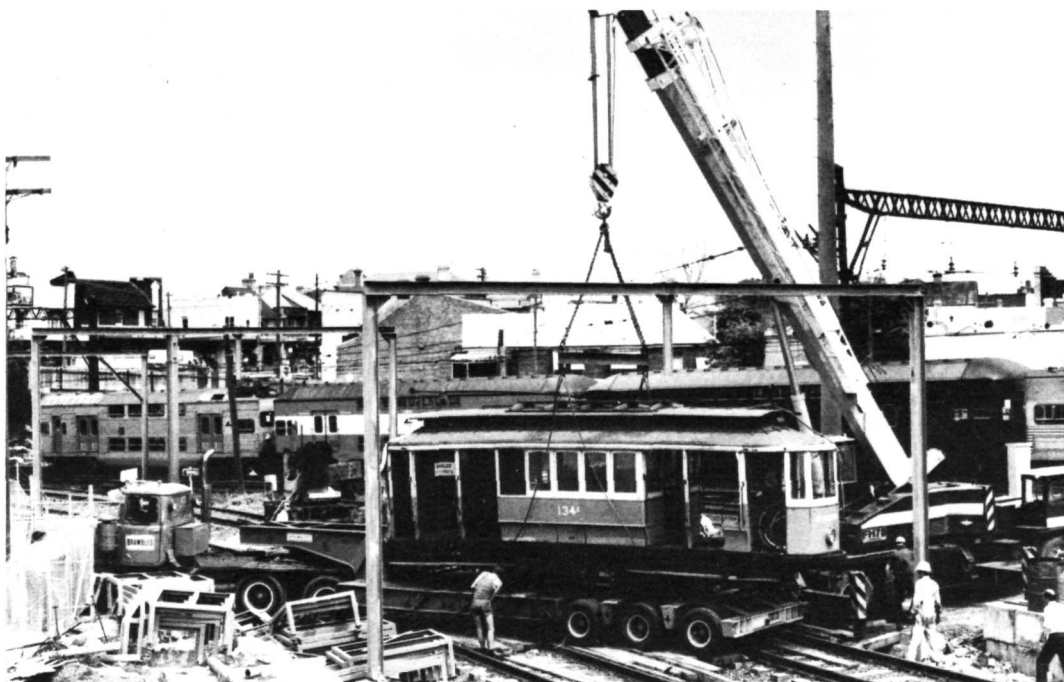
fitted and some trial runs made to bed them in. Scrubbing commenced the following Monday and will continue along the down line, working from turnout to turnout, until Bondi Junction is reached. The up track will then be similarly treated. A final light pass will probably be made just prior to services commencing.

The car and flat truck are securely stabled in the turnback tunnels when not in use.

ABOVE: D scrubber 134s in the Up Illawarra Relief tunnel, approaching Redfern.

BELOW: A multi colour suburban train passes during unloading operations at Erskineville.

- Both R.I.Merchant



★ Museum Notes and News

C.O.T.M.A.

News from the Council of Tramway Museums of Australasia

COTMA Chairman Dr. J.C. Radcliffe has finalised the matter of the 21E type 4 wheel trucks with STIB in Brussels by ordering eight on behalf of member societies. Two are for the AETM, Adelaide, two for MOTAT, Auckland and four for THS, Christchurch. The individual societies are now finalising their own shipping arrangements and it is hoped that all will be delivered by the end of the year.

When in New Zealand for the April COTMA Conference, John Radcliffe was able to talk to Wellington City Transport executives about the disposal of material from their cable tramway when it is replaced by new equipment later this

year. COTMA was subsequently supplied with a list of spare parts that would become available and these details were circulated to members. Only the THS, Christchurch, indicated their interest in obtaining some of these items and their name was conveyed to WCT for them to negotiate direct. Although COTMA did not have to mediate between societies due to an over demand for items, as was the case of the W3 and W4 cars from Melbourne, it has been a useful exercise in inter society liaison. We look forward to learning how Christchurch fare (and what happens to the cable cars, which were not included in the list to COTMA).

LOFTUS . . .

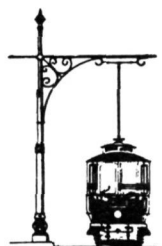
South Pacific Electric Railway

Trackwork

To allow four wheel cars to once again run over all the system at Loftus, certain track up-grading has been carried out in recent months. Some sleepers have been replaced and repacked whilst the frog at the east branch junction has been welded. Additional welding has been carried out on gaps in the main line and pointwork in the depot yard.

As the Eastern Suburbs Railway project draws to a close, the Sydney City Council has commenced reconstruction of Chalmers Street between Devonshire Street and Elizabeth Street at Eddy Avenue. This section was closed to traffic in 1948 and excavated to construct the

four underground platforms at Central Station. The tramtracks had to be diverted via Randle and Elizabeth Streets and whilst most of the disused section in Chalmers Street was removed when the road was excavated, the Devonshire/Chalmers Street Junction has lain relatively intact for nearly thirty years, for most of this period supporting a compressor shed. This junction is a double track left hand turnout with the through tracks curving slightly to the right. The society was able to recover most of the components from this junction on Saturday 23 September and it was subsequently transported to Loftus. At least one left hand turnout will be able to be made up from these parts.



Tramcars

R1 1979: The ceiling has been prepared for a second undercoat and finishing gloss coat. Thirty seat squabs recovered by courtesy of Sydney Technical College, have been received back. Most internal woodwork and metal cover strips have been replaced.

LP 154: Good progress has been made on this car. The seat slats in the northern end compartments have been removed and planed back to an even clean surface. Although this is a very time consuming task it is necessary to remove the many coats of paint and varnish to enable a reasonable finish to be obtained when the interior is redone.

K 1296: The battery operated, push button buzzers are now working reliably for the first time since this car made its farewell tour in Sydney in 1956.

PR1 1573: This car has generally been out of sight in a dark corner of the depot since it arrived in 1965. A pair of Melbourne W2 bogies were obtained for this car and whilst generally the same type and size as Sydney No. 9's, as fitted to the P class and its conversions, almost every vital dimension is different. Bob McKeever has been patiently working on mod-

ifications to the bolster. This had to be thinned down in height and lengthened and the body rubbing pads repositioned to match those on car. New king pins had to be made as these are bogie mounted in Sydney and were thus lacking on the W2 bogies.

Future work will entail modification to the axle boxes and the ends of the side frames to allow sufficient swing within the confines of the deep underframe and the possible replacement of some of the springs.

Trolley Bus

An area has been prepared at Loftus to accept the remains of trolleybus 19. However moving has been continually delayed due to rain falling at intervals just sufficient to ensure that the ground does not dry out to enable a tow truck to recover it from its present resting place.

Negotiations are being finalised for the purchase of the top deck of trolleybus 14. This is mounted on a truck chassis and is virtually unaltered. It has been used as a van by a caterer. A trolleybridge, bases, poles and heads are on hand having been purchased by a member from a scrap dealer in 1959.



SPER members recovering the major components of the double track junction at the Chalmers/Randle/Devonshire Streets intersection on Saturday 23 September 1978.
- V.C.Solomons

Around The Depot

A more secure steel cupboard for the storage of power tools has been installed in the annex adjacent to 4 road.

A door has at last been installed from the workshop into the side yard. Provision was made in the side wall framing for a double door however the one installed is only of single width; it is only intended to provide easier access to the stores and an additional emergency exit, it being hoped that the existing workshop will not have to function in a major capacity for many more years.

D Scrubber 134s – Return To Service

SCENE: SPER member sitting at desk doing routine work. Phone rings.

Caller: Eastern Suburbs Construction here. Do you have a scrubber car?

Member: (Pause) Yes. (Further pause) Do you want to borrow it?

Caller: Yes!

The above action took place on Friday 1 September 1978. The PTC were looking for something to clean the mill scale off the rails on the new eastern suburbs tracks before the line, then nearing completion, came into operation.

Following inspection of the D car and further discussions between the PTC and society directors and engineers it was agreed that the Society would co-operate and hire the

car and a four wheel trailer to the PTC for a nominal fee. The society also agreed to hire a silicon diode rectifier which would receive power from a motor alternator set that would be mounted on the trailer. Consideration was given to fitting the car with a pantograph and feeding the overhead with 750 volts utilising half the rectifier set in Edgecliffe substation. This did not prove feasible as work on the overhead was not complete and the ramp from the Erskineville tunnel portal to the Illawarra line was not wired at all. It was also possible that the overhead would be energised at 1500 volts before the scrubbing was finished. The trailer is a Sydney No. 13 bogie with a deck fitted on the top and was used as a trolley in a factory for many years.

Over the next ten days society members checked all components of the car and carried out some routine maintenance. It was found to be in fair mechanical condition, although the body, as is obvious, is showing its age. One of the air cylinders for operating the scrubbing gear was not working so this was changed for one from the components obtained from BCC 16 (ex Sydney 137s) when Brisbane closed.

The car and truck were transferred to Randwick Workshops on Wednesday 13 September for some additional mechanical work to be undertaken and the motor alternator and rectifier to be fitted up. The thrust plates in the axle boxes were built up by brazing and machined whilst the water tanks were cleaned and repaired and some attention given to the



Trams return to Randwick! D Scrubber 134s comes back after 17 years, having left, together with P 1497 and R 1740 on 16 August 1961. The flat truck is on the gooseneck of the low loader. 13 September 1978.



D Scrubber 134s and the flat truck stand on rails in the yard of Randwick Workshops shortly after their return and before the generator was fitted on the truck.

plumbing, both for air and water. 600 volts DC is still available at the workshops and this was used to run the compressor to test the scrubbing gear. The deck of the truck was strengthened and the sled mounted motor alternator set bolted thereon; coupling sockets were previously provided at Loftus. The rectifier was mounted in the cage which houses the resistance grids. When all was finally ready the tram and trailer set was given a trial run over about 100ft of track in the workshop yard at approximately 3 pm on Tuesday 10 September, neatly grooving the tarred surface in the process (a fair amount of track remains outside the machine shop and old foundry inside the King Street entrance but is mainly lightly covered with tar).

The PTC also made up special platework to allow safe passage of the tramway wheels over the railway profile pointwork and expansion joints as was standard practice when tramway stock was regularly transferred over the railway system.

The D and its trailer were moved from Randwick and placed on the Eastern Suburbs line (actually the up Illawarra relief at this point) at Erskineville on Friday 13 October 1968. It first moved under power at 11.28am. A society member has been transferred from another section of the PTC to operate what is now officially a track machine.

Further details of this operation are given in *The Sydney Scene*.

ALBION PARK ...

Illawarra Light Railway Museum Society



Locomotives

Since re-entering service on 3 July, the 2ft gauge 0-6-0 Hudswell Clarke tender engine 'Cairns' (B/n 1706 of 1939) has been in steam every Saturday and after 10 working days no

defects have emerged, this being a recommendation of the high standard of work carried out by the ILRMS members when they retubed the loco during the recent winter period.

During late August the Davenport 0-4-0ST 2ft gauge loco underwent several hydraulic

tests, the boiler and auxiliaries holding a pressure of 120 to 150 lbs/sq in without any difficulties. By early September this engine was awaiting its official boiler examination and pressure test and when this is completed, approximately one month's work will be required to complete the steam plumbing, clothe the boiler and refit the restored saddle tank.

The current efforts aimed at returning the Hudswell Clarke and Davenport locomotives to steam have left little time for progress on the restoration of the Perry 0-6-2T loco. Some work has progressed however, on small parts away from the museum site and this unit will again be the centre of attention when the Davenport returns to steam operation.

During early September the cab frames and panels of Shay 2 (Lima B/n 2097 of 1908) were completed and undercoated. Work is now progressing on the roof framework.

Rolling Stock

During July the second set of diamond frame bogies were returned from Garnock Engineering Company of Port Kembla rebuilt from 20 in to 24 in gauge. On 30 August, Balls Head cable hopper car 34 was lifted from the temporary set of bogies and the regauged units fitted.

Both preserved hopper waggons 24 and 31 have now been returned to their original running gear.

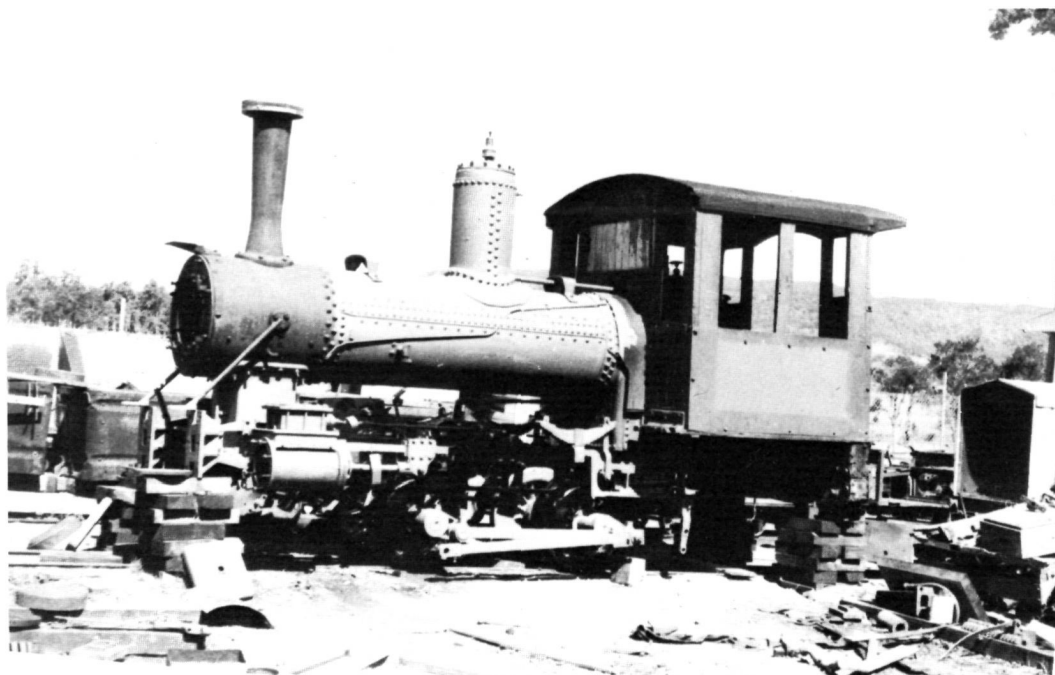
Work is now progressing on the completion of the new 2ft gauge passenger car. As reported in TW for June 1978, the metal frame of this large car was constructed by Allied Constructions and delivered to the museum during April. Two ex Condong (CSR) bogies have been overhauled and resprung for use under this vehicle and by the start of September additional angle members were being welded to the chassis to enable the tongue and groove flooring to be fitted. Sheets of galvanised steel were on hand at that stage for enclosing the curved side walls up to window sill height.

Publicity

On Saturday 21 August the loco *Cairns*, with brasswork shining and paintwork gleaming, was the star attraction on a short news clip which was screened on ABC Wollongong TV ABWN 5A on the following Monday evening.

Railway Exhibition

On the weekend of 26/27 August, museum, restoration and model railway groups of the



The Davenport loco undergoing restoration with the saddle tank removed and the boiler cladding stripped off. - K. McCarthy

Illawarra and nearby regions, staged a very successful exhibition in the Combined High Schools Hall at North Wollongong.

Some 17 displays were presented and over 3000 people visited the exhibition. In addition to the usual commercial and model railway club layouts, the Illawarra Historical Society staged a large photographic display of local railway topics reaching back over the last 90 years, while the Illawarra Group of the RTM manned a stall with photos, builders and other relics on display and for sale. The ILRMS shared a large floor area with the South Coast Model Engineering Society. The light railway section included a display of photos depicting ILRMS progress over the last seven years, a working model of a light railway linking a mine with a standard gauge railway siding and an interesting exhibition of O gauge live steam, clockwork and electric models from the J.Fox collection with items dating back to the turn of the century.

A major attraction was an electric tram operating along 100 yards of 2ft gauge track laid down on the concrete service road at Keira Boys High School. The tram is a half size Birney Safety Car built over the last two years by ILRMS/SPER member Richard Youl (see TW February 1974) at a cost of \$1300 and this exhibition was its first public appearance. Over 3600 fare paying passengers took rides on the tram during the two days of operation and considering that it only seats 16 people, its

trouble free service speaks highly of the quality of the model.

The tramcar is fitted with air brakes, tram gongs, railway air whistles and the two motors are regulated through two former Sydney O type controllers.

Work is nearing completion on 300ft of tram track at the ILRMS museum connecting the car park area with the former Yallah station building from where passengers will join the steam trains. The above mentioned Birney tramcar is expected to take up operation on this line towards the end of this year.

Also outside the hall at the exhibition the two live steam groups provided rides on a large circular ground level track while a superb 1/3rd scale traction engine, constructed by Stan Hennock steamed around the car park area during the first day.

LATE NEWS: The Davenport passed its boiler test at the end of September and the boiler has been re-clothed. The saddletank was refitted on Friday 6 October and it was successfully steamed on Saturday 14 October. Cairns was also in

The ILRMS has obtained an ex Sydney 31 seat bus, minus engine, which will be used as a bookshop.



Tony Madden, Hon. Secretary of the ILRMS on duty at the Railway Exhibition 27 August 1978. The progress photos can be seen, while in the foreground Hornby, Bing, Bowman and Bassett-Lowke O gauge trains are on display. - K.McCarthy

BYLANDS . . .



Tramway Museum Society of Victoria



Stored at the south end of the main line for a few days while work was being carried out in the depot, this line up of eight cars makes an impressive sight. From left to right: X2 680, Ballarat 36, X1 467, cable trailer 192, Ballarat 23, W3 667, Ballarat 17, horsecar 256. 27 December 1977 - K.S.Kings

The main news this issue concerns further rolling stock acquisitions. Firstly, we have acquired another cable tram trailer. It is no. 95, a former Victoria Bridge route car, which has rested in an Elsternwick backyard for nearly half a century. It is about as complete as one could hope to find such a vehicle these days, but is minus seat bottoms, handbrake staffs and some small fittings. It was sheltered by a gable roofed fernery which also caused most of the sides to be protected, but allowed one corner to weather. Removal was quite a problem, as it could not be taken through the side fence by which it arrived. It was decided to move it some forty or so feet down the back yard and then lift it over fruit trees, shed and easement onto the low loader in the back lane. The crane which had to be used possessed a 90 telescopic jib and gave the neighbourhood children their best Saturday morning entertainment for some time! We encountered many problems with jacking in the sandy soil and the wheels running off the 'rails' and getting bogged in the soil and in thick, aged buffalo grass. Eventually the crane driver came to the rescue by allowing the cable to be taken a few feet forward of the perpendic-

ular to un bog the car for the final time and get it within his lifting limits. The rest of the operation seemed like an anti climax as 95 swung high over the sheds and fence and down onto the truck. We cleared our impressive array of jacks, tools and odds and ends away remarkably quickly, tidied up the garden and headed away. 95 arrived at Bylands later that day — 26 August 1978 — and was soon rolling down the dropped goose neck of the low loader onto our rails.

Thus ended 10 years of patient waiting for this car to become available when no longer required by its owner.

The second rolling stock item acquired elevates the TMSV into the ranks of every other capital city tramway museum in Australia — we have obtained a motorbus from the M&MTB. It is AEC Regal Mk3 single deck diesel bus 564 with body by Martin & King of Melbourne. We are most grateful to the Board for presenting this vehicle to the Museum, as it is typical of the 135 buses with this chassis which have been the backbone of the M&MTB's bus service since they were commissioned between 1951 and 1954. We feel it will provide an interesting

New sign at the Museum's front gate being erected on 27 May 1978.

David Webb (left) tightens the bolts while Clive Mottram hammers in a wedge to stabilise the post.

- K.S.Kings



comparison with our growing tram fleet and being 25 years old on 29 September of this year its arrival at Bylands about this date will be a happy coincidence. The Martin & King body was selected because this firm built 69 of these buses wherea only one was built by Ansair, another Melbourne firm and there are examples of Commonwealth Engineering bodies (the other builder) preserved in Sydney.

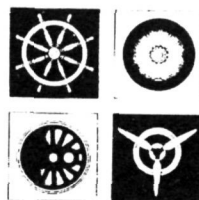
An offer was received from a social club at Bulleen to remove any items we wanted from W3 658 which had been placed in their grounds two and a half years ago, but had been reduced to a shell by vandalism. A few parts were obtained and the club disposed of the remains.

The editor is in trouble again for getting things wrong! The description of the moving of Geelong 9 in the August 1978 issue gave the impression that difficulty was experienced in moving the body sideways to line up with the door in the end of the shed. This actually was easily accomplished, the difficult bit being the longitudinal movement down the shed as the rails placed for the sideways movement dug in and tended to turn over. The rollers were then used instead.

Using the faithful old tractor as a brake, cable trailer 95 is eased off the dropped goose neck low loader onto Bylands rails. 26 August 1978.
- K.S.Kings



GLENORCHY . . .



Tasmanian Transport Museum Society

Museum Building

The necessity to fulfil the requirements of the State Fire Authority has led to an unforeseen delay in commencing construction. The Authority recommended the provision of a water main within the museum site with a fire reel and hose installed in the new building.

The society was anxious to comply with this requirement as it will provide a valuable safeguard for buildings, exhibits, etc. With the co-operation of local authorities a 4in water main has been extended to the site. The foundations of the building were now to be poured during September and the steel frame, which has been fabricated, will be erected thereon soon afterwards.

Trackwork

Work on the track linking the state rail system with the museum is progressing satisfactorily, the only work remaining is to put the finishing touches to the turnout leading from the railway siding. The complete connection has been ballasted with crushed metal topped with ashes. The installation of another set

of points leading from the new connection to the centre of the site was commenced on 9 September. This will enter the site through a new set of gates with a 15' opening and will be the means whereby Hobart tramcar 141 will be delivered to the museum from its temporary home at the Hobart goods yard, hopefully later this year.

Site Works

The foundations were prepared and the erection of a railway water column was carried out during September. The column originally was installed at the Glenorchy Station only a short distance from the museum. Although not connected to a water supply, the column could be put into use at a later stage should it be necessary.

The society has purchased a large water crane located in the Hobart railway yard for

The newly acquired 2ft gauge bogie waggon is a hefty vehicle and needs plenty of manpower to move it. - D.H.Jones



dismantling and re-erection at the museum. The acquisition of such items is in line with society policy to recreate an authentic atmosphere using actual relics and if possible to have them operational.

New Exhibit

A group of society members, under the direction of Ted Lidster, recently salvaged a 2ft gauge bogie railway waggon from Catamaran - the most southerly settlement in Tasmania - where it was discarded following the closure of the colliery in circa 1939. The waggon is relatively complete and in fair order, lacking only the timber deck. Its previous history is obscure but it is thought to have worked on the Sandfly tramway and possibly on the west coast.

Melbourne Excursion

A party of 19 members and families visited Melbourne on the weekend of 1-3 September, flying from Hobart on Friday evening and returning on Sunday evening.

Maximum use was made of the time enabling members to inspect and ride on a wide variety of transport. On Saturday, using a 1949 White bus by courtesy of the Historic Commerical Association, the group visited HMAS *Castlemaine* under restoration at Williamstown, the ARHS railway museum and the barque *Polly Woodside*.

The afternoon was spent at the Puffing Billy railway, the party travelling by train to Lakeside and return. The opportunity was also taken to visit the carriage sheds, locomotive workshop and the railway museum at Menzies Creek. The day was rounded off when members travelled from the East Burwood terminus on Z class tram 20 to the city.

On Sunday the group journeyed to Ballarat by the Vintage Train. The highlight of the short stay was the visit to the BTPS tramway and travel on their tramcars. A quick visit was made to Sovereign Hill before returning by train to Melbourne.

A rather tired but very contented group boarded the 9 pm flight for Hobart but all agreed that the weekend had been most rewarding and worth repeating.

Special thanks go to the organiser, David Verrier and to the various societies involved for their most helpful co-operation.

Annual Meeting

At the Annual General Meeting held on 17 August the following office bearers were elected for the ensuing year:

President	David Beck
Vice President	Wally Mounster
Secretary	David Jones
Treasurer	David Verrier

Committeemen

Ted Lidster
Bryan Johnson
Noel Woodrow
Colin Quon

The former President, Ron Crowden and Vice President, Bill Court did not seek re-election, their vacancies being filled by messrs Mounster and Quon.

Rail Services

Passenger services on the Tasmanian Railways have now ceased. Excessive losses and poor patronage were the reasons given by the ANR for the decision. This concludes an era of transport in Tasmania spanning over 107 years.

Although no official farewells were planned society members were much in evidence on the final two services which operated.

On Friday 21 July 1978 at 5pm the last fortnightly train, comprising rail cars DP's 26 and 29, left Hobart for the 55 mile run to Parattah and return. Seventeen members availed themselves of the final opportunity to travel on this service and experience perhaps for the last time also, travel by railcar in normal service.

The final run by the *Tasman Limited*, Tasmania's only major passenger train, took place a week later on Friday 28 July 1978, operating in both directions between Hobart and Wynyard on the north west coast. Several members made the through journey from Wynyard or the journey from Hobart to Western Junction, where the two trains cross, and return.

Following the failure of an Arbitrator to recommend the retention of these rail services it now seems unlikely that rail passenger services will be reintroduced in Tasmania.

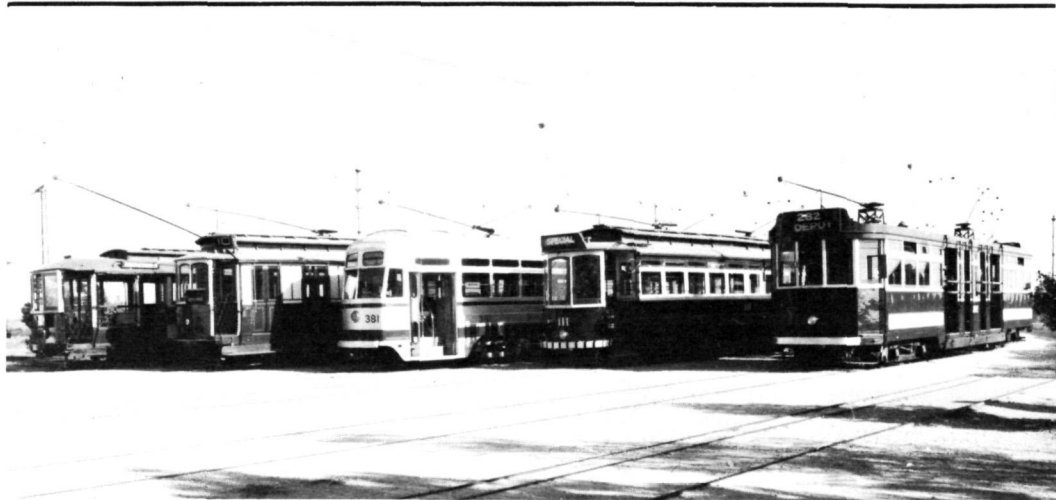
The new rail connection takes shape as TTMS members set about ballasting it.

- D.H. Jones



ST KILDA . . .

Australian Electric Transport Museum



The AETM Adelaide car fleet has been reunited at St. Kilda. Cars in this lineup are (left to right) A 1, D 192, H1 381, E1 111, F1 282. - STA

Cars Return

The Museum's cars have now been returned by the STA to St. Kilda. Car 282 returned on 30 August, 303 and 381 on 31 August and 1 on 1 September. Cars 282, 381 and 1 have been returned to regular service on the St. Kilda line while 303 has been withdrawn to complete the repainting which was largely finished at City Depot prior to the Transport Centenary. The remaining sections of the ceiling which could not be repainted earlier are now being done.

Members Day

The annual member's day was held at St. Kilda on 2 September 1978. Motormen underwent refresher training under the supervision of Operations Manager Max Fenner and emergency braking for direct control two motor and four motor cars and remote control (PC5) cars was practised by all candidates. Ron White held a revision session for conductors on safe car operation and traffic responsibilities. An evening barbecue was followed by a nine car 'Sprague Test' which revealed the limits of the DC power distribution system, unlike the eight car test held in 1977. Due to rain falling at the

time, car 192 was excluded from the test as it had some recently applied but as yet unvarnished linework on it. The evening concluded with a pictorial review of the development of the museum and movie films of the AETM cars operating on the Glenelg line.

Show Exhibit

The State Transport Authority exhibited a stand in the 1978 Royal Show, the first occasion that this has been done for many years. On display were horsecar 18, Garford 208 and a Roadliner tourist coach. A series of postcards ordered jointly by the AETM, ARHS and STA from the South Australian Government Printer went on sale for the first time. Museum cars featured include horsecar 18 and electric cars 1, 192, 282 and 381. The STA also released a new edition of its booklet 'Transit In Adelaide' which featured colour photos of the Centenary celebrations including views of the AETM cars in King William Street taken during the procession by BTPS engineer Bill Kingsley. The horse car, which had been fitted with an upper deck canvas awning prior to the show, returned to St. Kilda on 13 September 1978.

TROLLEY WIRE

Toastrack Car

Following ratification at a Special General Meeting on Member's Day of proposals to reconvert A2 type car 42 back to its original B type toastrack configuration, most of the centre saloon has been dismantled.

Trolleybus Shed Improvements

A comprehensive security upgrading of the trolleybus shed has been recently completed by Chris Steele. Work included new door locks, birdproofing of door surrounds and rubbing of the floor to sill height. These improvements have greatly improved the tidyness of the building. At the same time, the Museum executive has decided that visitors will in future only be permitted to enter the rear platforms of buses in order to minimise the risk of damage to control equipment, especially by children.

Maximum Traction Pony Axles

Nine maximum traction pony axles with wheels recently appeared in a local salvage yard and these have been purchased by the museum. Not all are expected to be required in the ultimate development of the AETM's fleet and some have been offered to COTMA affiliates. Several have already been reserved by other groups.

Glenelg Golden Jubilee

Following the success of the Adelaide Street Passenger Transport Centenary Celebrations, the STA has established a committee to plan for the Golden Jubilee Celebrations for the Glenelg Tramway in December 1979.

The Chairman is STA Traffic Manager Mr. E.Hall and Secretary is STA Executive Assistant John Drennan who so ably managed the



Glenelg bound Birney car 303 passes F1 282 on the reserved track, during the Centenary Celebrations. - J.C.Radcliffe

centenary operation. Other members include City Depot Foreman Blair Howell, Per Way Engineer Ian Domleo, the Mayor of Glenelg Mr. A. Smedley and John Radcliffe and Ron White from the AETM.

The Jubilee is expected to focus on H type car 351 which opened the line in 1929. (In recent years, this car, which is presently in silver livery, has carried the number 359 as the remaining fleet is numbered 355-380). The principal formalities will be held on Sunday 15 December 1979, but it is expected that special operations will extend between 8 December 1979 and 10 January 1980. To cater for the influx of interstate holiday visitors to Glenelg at that time of the year, proposals of even broader appeal than the recent horsecar centenary are being considered. Details will be given as they come to hand.

CANNINGTON . . .

Western Australia Transport Museum



Trouble from vandals is still a problem despite measures that have been taken to combat them. Fremantle 29, Ballarat 31 and W4 674 have been the latest victims with much glass and some fittings broken.

The remains of K 126, burnt out in April, were searched for any usable metal fittings and it was burnt once again to dispose of the little that was left.

It is proposed to move the body of B 46 into the compound but this has been delayed by the wet weather.

On a brighter note negotiations for a new site at Fremantle are proceeding and at this early stage the outlook is reasonably optimistic. Detail plans are now being drawn for submission to the full council.

MUSEUM DIRECTORY

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) INC. St. Kilda, South Australia.

Trams — Trolley Buses — Electric Locomotive

Trams operate Sundays & Public Holidays 2 — 5 pm. No public transport available. Interstate visitors please contact the AETM if transport required.

In emergency phone (08) 297 4447.

Correspondence: The Secretary, AETM (SA) INC.,
Box 2012 G.P.O., Adelaide,
S.A. 5001.

BALLARAT TOURIST TRAMWAY

Ballarat Botanic Gardens, Wendouree Parade, Ballarat, Victoria (Ballarat Tramway Preservation Society Limited).

Tram Rides, Static display of trams, photos;
Sales Department etc.

Operates Saturdays, Sundays and Public Holidays (Christmas Day excepted) and most days during Victorian School holidays and the Ballarat Begonia Festival 11 am — 5 pm.

Telephone: Tram depot (053) 34 1580,
Bungaree House (053) 34 0296

Correspondence: The Secretary, B.T.P.S.
Box 632, P.O., Ballarat.
Victoria. 3350.

BRISBANE TRAMWAY MUSEUM SOCIETY McGinn Road, Ferny Grove, Queensland

Static Display of trams and trolleybuses

Correspondence: The Secretary, B.T.M.S.,
McGinn Road, Ferny Grove,
Queensland. 4055.

WESTERN AUSTRALIAN TRANSPORT MUSEUM (INC).

Tramway Museum and Bus Operation, Castledare Boys Home, Watts Road, Wilson. W.A.

London RTL Double deck bus rides 1st Sunday in month 1.00 pm to 5.00 pm.

Correspondence: The Secretary,
Box 33, P.O. Maylands,
W.A. 6060.

STEAM TRAM & RAILWAY PRESERVATION (CO-OP) SOCIETY LIMITED Parramatta Park Steam Tramway, Parramatta N.S.W.

Steam Trams are operated on the 3rd Sunday of every month, from 1.30 to 4.30 pm.

The Society possesses 1 steam tram motor, 2 steam locomotives and 5 various trailer cars.

The surrounding parklands are suitable for picnics, barbeques, etc. and contain historical buildings.

Public transport is available. Rail to Westmead station then walk across parklands to the depot.

Correspondence: (SAE would be Appreciated)
The Secretary, S.T. & R.P.S.
Box 108 P.O., Kogarah.
N.S.W. 2217

SYDNEY TRAMWAY MUSEUM Princes Highway, Loftus N.S.W. (South Pacific Electric Railway Co-op. Society Limited).

Electric trams from N.S.W., Queensland and Victoria.

Tram rides Sundays and Public Holidays (Except Christmas Day and Good Friday) 10.30 am — 5.00 pm.

5 minutes walk south from Loftus Railway Station.

Correspondence: The Secretary, SPER,
Box 103 G.P.O., Sydney.
N.S.W. 2001.

TASMANIAN TRANSPORT MUSEUM SOCIETY, Glenorchy, Tasmania.

Comprehensive transport museum under construction

Correspondence: The Secretary, T.T.M.S.,
Box 867J, G.P.O.,
Hobart. Tas. 7001.

VICTORIA'S TRAMWAY MUSEUM Union Lane, Bylands, Victoria. (Tramway Museum Society of Victoria Limited.)

Horse tram rides, museum site, trams, photos and other items on display, Sunday 11.00 am to 5.00 pm.

Correspondence: The Secretary, TMSV,
Box 4916 Mail Exchange,
Melbourne, Victoria. 3001.

ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY Albion Park N.S.W.

Inspection of exhibits by arrangement, phone (042) 71 3707

Correspondence: The Honorary Secretary,
Box 1036, P.O. Wollongong
N.S.W. 2500

BACK COVER: *The varied faces of diesel electric traction!*

TOP: *Two unusual diesel electrics in the shape of overhead line car AL21 and D scrubber 134s pass amid the construction clutter at the Eastern Suburbs connection at Erskineville. AL21 is a somewhat more permanent conversion from an electric car than the D, whose power plant is readily visible.* - R.I.Merchant

LOWER: *The last 'Tasman Limited' from Hobart leaves behind two X class locos on Friday 28 July 1978. These English Electric machines were the first mainline diesel electric locos in Australia.* - D.H.Jones



DIESEL ELECTRIC TRACTION

