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THE CLOSURE OF GEELONG

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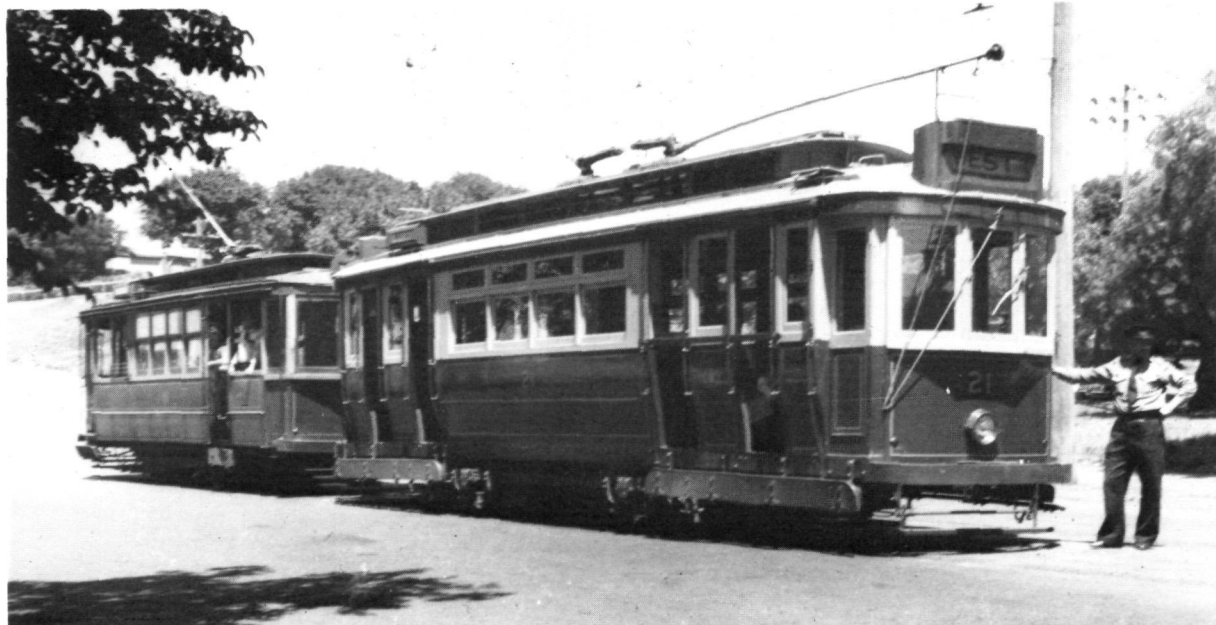
Twenty Five Years Ago—

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FRONT COVER: GEELONG—Car 8 at the Chilwell terminus, Pakington/Fyans Street corner. 14 January 1954. - K.McCarthy

BACK COVER TOP: Latest of those great survivors, Adelaide's three door Leyland Worldmasters, to emerge in a new guise is 946, which ran a free 'Coastal Clipper' service along Adelaide's seaside suburbs from December 1980 to February 1981 on Saturdays, Sundays and Public Holidays. The bus was extensively refurbished, all three doors returned to working order and surfboard racks were fitted. As the cost of the service was paid by sponsors, it was run as part of the charter fleet and renumbered 111. - STA.

BACK COVER LOWER: Three generations of Melbourne tramcar are in this view outside Flinders Street station during the Melbourne Pageant, Transport Cavalcade on Australia Day 1981. To the Left, in Swanston Street, is a W5, depicting the typical middle generation tram; to the right is a modern Z car; whilst in the centre foreground is an ex HTT, M&MTB and SECV four wheel car of 1916 vintage. Car 27 has operated in Ballarat since 1930, at first for the SECV and latterly with the BTMS. It briefly returned to Melbourne for the pageant. - William F.Scott



TWENTY FIVE YEARS AGO . . . THE CLOSURE OF THE GEELONG TRAMWAYS

By K. McCarthy

March 1981 marked the quarter century anniversary of the closure of the Geelong tramways. A history of the system appeared in this magazine in the April 1976 issue, while contemporary news reports were presented between 1952 and 1956. This brief article endeavours to avoid much of the previously published material and to briefly touch on some other aspects of this once busy tramway network.

On viewing the Victorian tramway scene in the early 1950's one would not have expected the busy Geelong tramways to be abandoned during that decade and for the other two provincial systems in Ballarat and Bendigo to remain in operation as common carriers until the 1970's and beyond, in truncated form, as tourist ventures. But the Geelong tramways, as well as the two Victorian Railway tramlines at St. Kilda and Sandringham, fell victim to bus conversions during that decade.

The first two Geelong routes, from the city terminals at the Wharf and the Railway Station to Newtown and West Geelong were ceremoniously opened on 14 March 1912, Geelong being the last Australian city to inaugurate tramway operation. Later independent installations were constructed in Melbourne and the large steam tramway system at Newcastle N.S.W. was not electrified progressively until December 1923, but to Geelong falls the honour of being the last tramway city in Australia.

The Melbourne Electric Supply Company Ltd., which supplied Geelong with electricity from the turn of the century, established the tramway system. Unlike the Electric Supply Company of Victoria Ltd. which had earlier electrified the horse tramways of Ballarat and the steam lines in Bendigo, the Geelong company served a steadily growing city both in economic prosperity and population. The MESCo. was therefore able to steadily

*Pengelly car 21 and Duncan and Fraser car 7 at Beach terminus, Geelong.
5 January 1951. - K. McCarthy*

expand the system, mainly with new rolling stock, and to carry out maintenance at a satisfactory level.

The Geelong trams not only served the three main streets through the substantial central business district, but also tapped the two main entry points to

the city, the railway station and the wharf on Corio Bay.

The continual expansion of the Geelong tramways is summarised in this table:-

Openings and Extensions

Route	Details	Opening Date
Wharf	City to north end of Moorabool St.	14-3-1912
Station	City to Railway Tce. via Malop St.	14-3-1912
Depot	Moorabool St. to Corio Tce.	14-3-1912
West	City to Pakington/Church Sts. via Ryrie St.	14-3-1912
Newtown	Pakington/Aberdeen Sts. to Aphrasia St./Shannon Ave.	14-3-1912
South	Moorabool/Ryrie Sts. to Moorabool/Fyans Sts.	
South	Moorabool/Fyans Sts. to Barwon Bridge	12-1913
East	Moorabool/Ryrie Sts. to Garden/Ryrie Sts.	12-10-1922
East	Garden/Ryrie Sts. to Humble St./Ormond Rd.	25-1-1923
East	Humble St./Ormond Rd. to Boundary/Ormond Rds.	1-3-1923
Chilwell	Pakington/Aphrasia Sts. to Pakington/Fyans Sts.	30-9-1927
Belmont	Barwon Bridge to Colac Rd.	16-12-1927
North	Mercer/Malop Sts. to Bell Parade	6-7-1928
North	Bell Parade to Victoria St./Melbourne Rd.	14-6-1929
North	Victoria St./Melbourne Rd. to Separation St./Melbourne Rd.	20-12-1929
Eastern Park	Ryrie/Garden Sts. to Port Arlington Rd.	10-9-1930
Beach	Depot to Corio Tce./Bellarine St.	19-10-1940

DUPLICATIONS

Route	Details	Date
City	Moorabool St. from Malop to Ryrie Sts.	14-3-1912
Station	Malop St. to Railway Tce.	1914
Wharf	Malop/Moorabool St. to Wharf	1914
East/West	Garden St./Ryrie St. to Latrobe Tce./Ryrie St.	1923
West	Latrobe Tce./Ryrie St. to Aberdeen/Pakington Sts.	4-1929
North	Mercer St. to Victoria St./Melbourne Rd.	1929/1930
Depot	Long loop in Corio Tce.	5-1929

DEVIATIONS

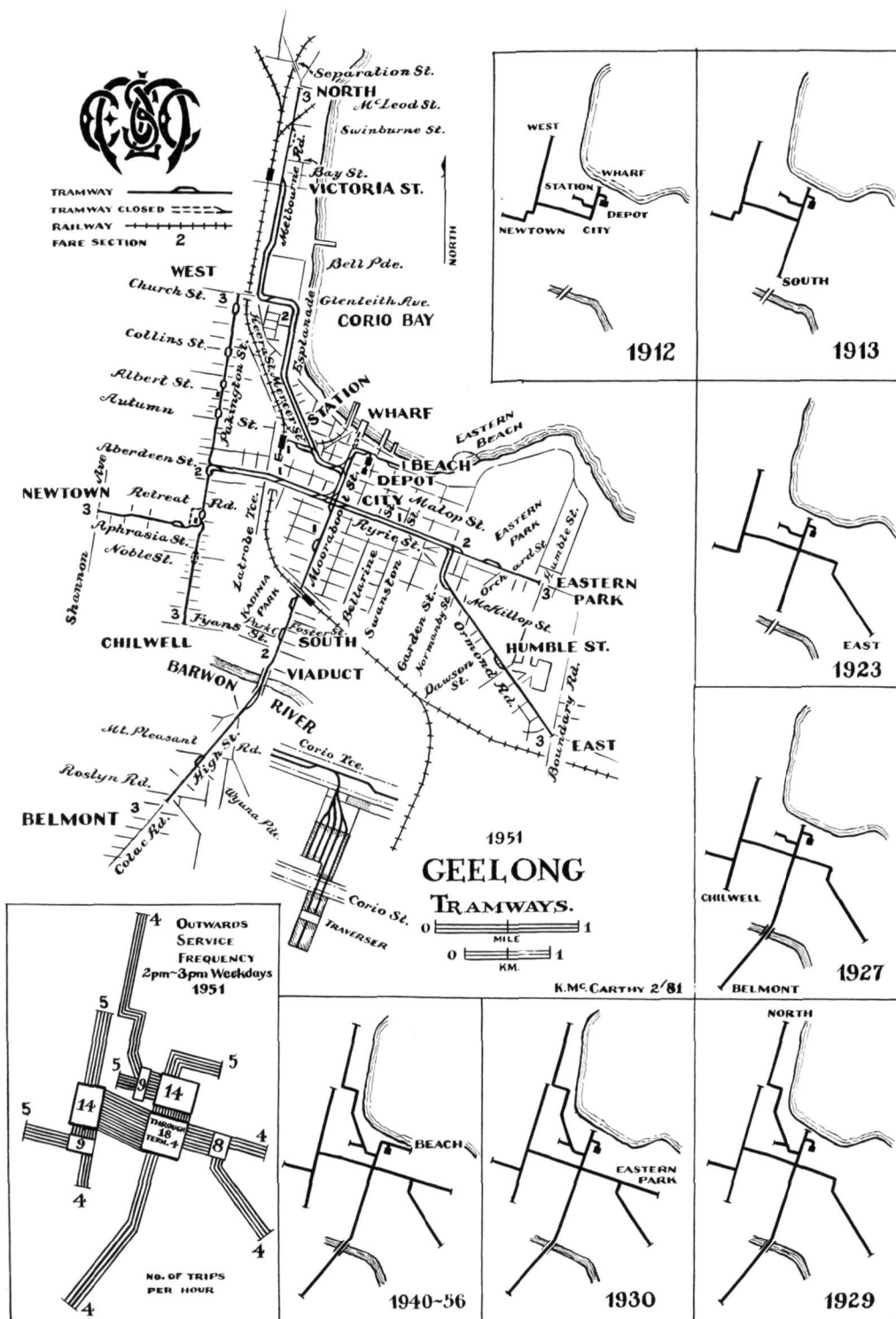
Route	Details	Date
Newtown	Retreat Rd./Pleasant St. to Pakington St./Aphrasia St.	1914

To provide a passenger service to areas not then served by trams the MES Coy. purchased three single deck Milnes-Daimler lorry chassis and had them fitted with saloon bodies by Duncan and Fraser. These entered service in 1912 and were withdrawn from traffic in 1922 when the tramway reached East Geelong. The bodies were fitted with five windows each side and passengers paid the driver as they entered the open fronted bus through the driver's platform and through a centrally located front bulkhead door.

The State Electricity Commission was established

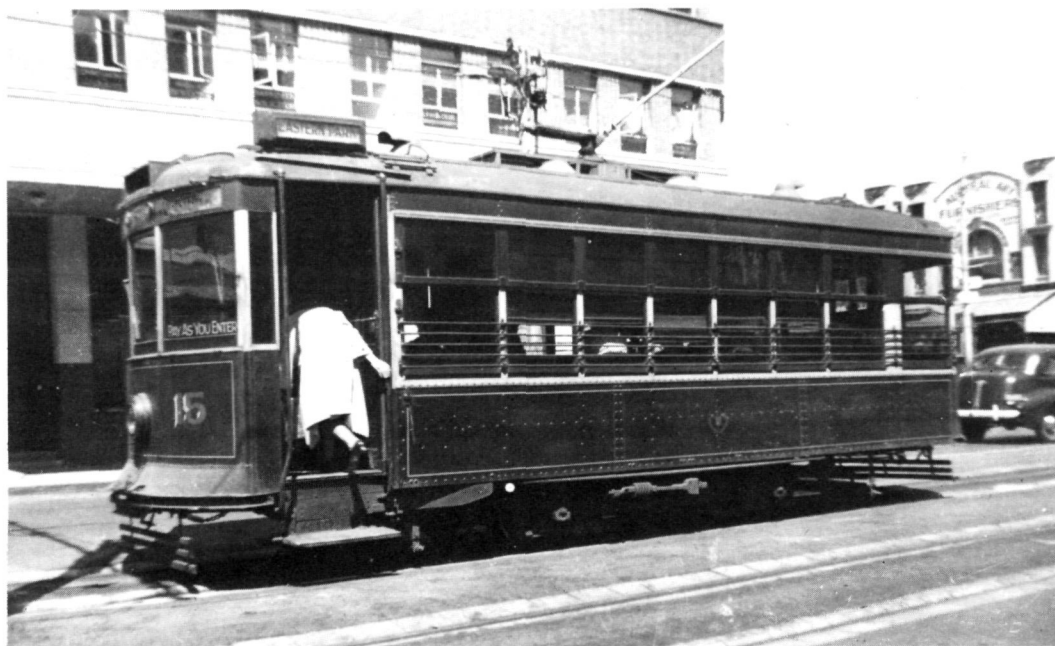
in Victoria during 1919 to construct large centralised electricity generating plants at Yallourn and Morwell using fuel from the large brown coal deposits. This body ultimately took over the operation of the various isolated power houses throughout the state and replaced most of these as the state wide supply grid extended from the central stations. The SEC also took over the domestic distribution and retailing roles in most areas of Victoria when such opportune moments as lease and franchise expiry of the established firms occurred.

The three Victorian provincial electric tramways





Car 2 at Geelong Wharf terminus circa 1920. The steamship to the right is the Edina; a veteran Port Phillip steamer which was launched in 1854 and was not broken up until 1957. - K.Magor collection



Birney car 15 in Ryrie Street at the Moorabool Street intersection. 4 February 1948. The car was working on the City to Eastern Park service. - Late J.McCarthy

were established by the supply authorities at a time when the main use for electricity was lighting and the peak demands occurred after dark. Tramway operation was a method of creating a daytime power demand and, in those far off days when few families owned private motor cars, was a profitable sideline for the electric generating and supply companies.

The decision as to the future of the three provincial tramway systems in Victoria was not reached until the 1928-9 period when the SEC reluctantly agreed, under political pressure, to become the tramway operating authority.

The Geelong tramways as well as the power generating and supply assets of the Melbourne Electric Supply Coy. Ltd. were taken over by the SEC on 1st September 1930. The purchase date of the Electric Supply Coy. of Victoria Ltd. and its Ballarat and Bendigo tramways was timed for 1 July 1931, but the take-over was a gradual operation direct control not being finalised until 1 July 1934. Whereas the Geelong tramways were in fine physical shape the Ballarat and Bendigo systems had declined into a derelict condition. With the exception of the large brick depot at Bendigo, the rest of the plant and rolling stock of the two inland tramways could only be valued at "scrap" prices.

The SEC set about rehabilitating the Bendigo

and Ballarat tramways from 1934, a task which did not reach completion until the eve of World War II. Included in this project was the replacement of the original tramcars with second hand Melbourne rolling stock in Ballarat and Bendigo while the Lydiard St. line in Ballarat was extended for over a ½ mile on 28 August 1937 and the Lake Weeroona tramway in Bendigo expanded to North Bendigo, an extension of one mile, as a wartime measure on 23 November 1942.

The Geelong system did not require such rehabilitation. The steamer service from Melbourne, across Port Phillip Bay closed just prior to World War II and the need no longer existed for trams to terminate at the Wharf. The tracks at the north end of Moorabool Street were lifted from the road in 1939 and relocated along Corio Terrace to Bellarine St. eastwards from the Depot to a new terminus known as Beach. This new operation, which brought the tram passengers to within walking distance of Eastern Beach opened for traffic on 19 October 1940 for the summer swimming season.

While the original Bendigo and Ballarat cars were of very flimsy construction, the original Geelong vehicles were substantially built.

The following table lists the cars built new for the Geelong system between 1912 and 1925:-

Cars Built New For Geelong

Fleet No.	Type	Builder	Date	Notes
1-7	California cars. 4 wheel.	Duncan & Fraser Adelaide.	1912	Built for opening on 14-3-1912
1-4	Open cross bench trailers. 4 wheels.	Duncan & Fraser Adelaide.	1912	Built for opening on 14-3-1912. 1 & 4 converted to motor cars 11 & 12 in 1913. 2 & 3 scrapped c 1926.
8-10	California cars. 4 wheels.	Duncan & Fraser Adelaide.	1915	Built for increased traffic.
11-12	Open cross bench trailers. 4 wheels.	Duncan & Fraser Adelaide.	1913	Converted from trailers 1 & 4. For extra traffic due to Sth. Geelong. Scrapped c 1926.
14-15	Birney safety cars. 4 wheels.	Brill U.S.A.	1924	Used on Sth. Geelong. In service 27-8-24 and 29-9-24. Supplied in "knocked down" condition Dec. 1923.
16-23	California cars. 4 wheels.	A. Pengelley Adelaide.	1925	For increased traffic on East & Chilwell lines.
13	Scrubber car. 4 wheels.	Geelong shops.	c 1928	Constructed on chassis of NMET&LCoy open trailer ex M&MTB.

In addition to these 25 new cars a further 21 vehicles were obtained from the Adelaide and Melbourne tramways between 1928 and 1951.

Unlike Ballarat and Bendigo, where population figures have revealed periods of economic expansion and decline over the last 50 years, Geelong has shown a steady growth pattern, especially in the period following World War II. In 1953 the

population of Geelong amounted to 70,000 by 1961 this had reached 92,000 and by 1973 the figure had grown to 127,000! This expansion brought about the extension of the suburban areas well beyond the tramway territory or into regions between established tram routes but beyond easy walking distance to such facilities.



*Bogie car 34 at North terminus, Melbourne Road (Princes Highway)
Geelong. 14 January 1954. - K.McCarthy*

Industrial expansion in the 1940's and 1950's developed in the North Shore region of Corio Bay, a considerable distance from the North Geelong tram terminus. As Australia returned to a peacetime footing and petrol rationing eased, riding figures of the Geelong tramways dropped rapidly.

In the late 1940's Mr. H.H. Bell Jnr., the son of the Chairman of the Melbourne Tramways Board, compiled a series of reports on the transport needs of Ballarat, Bendigo and Geelong for the immediate post war period.

The Geelong report was released towards the close of 1948 and recommended the replacement of the trams with buses and the development of a suburban train service on the existing railways in the Geelong area. This report met with a mixed reception from the Geelong councils . . . the thinking trend for the future, however, had been launched and only the extreme optimist could see a future for the tramway system.

Track plant, although continually maintained, largely consisted of the original rails, sleepers and road bed while the road surfaces around the tracks, especially on the North route, suffered from the wear and tear of heavy road traffic.

The Geelong network had developed on the lines of a large city system, rather than a provincial

undertaking. Lines branched from trunk routes in the distance suburbs meaning that a fifteen minute frequency to some outer terminals would provide a 7½ minute service on a trunk section shared by two routes, or a 5 minute service on that shared by three routes. If the shared portion was reduced to 15 minutes in off peak periods the service at the outer terminals would be very infrequent.

The Newtown, Chilwell and West Geelong services shared a common route for over a mile while the first two services shared track for a further ¾ mile. The East and Eastern Park operations shared track for a mile and the North and Railway Station tramways shared a half mile of route in the city area. The frequencies along Ryrie and Moorabool Streets were so close that there was always a tram in sight during off peak periods. Such operations resulted in heavy track wear in the near city region . . . a problem not experienced, for example, in Bendigo where no common track was shared by the four routes.

Until the 1960's two types of traffic control light signals were used in Victoria which were of non standard designs.

At many Melbourne intersections, where traffic flow was uniform in all directions, two aspect red/green signal lights controlled traffic flow.

STATE ELECTRICITY COMMISSION OF VICTORIA ELECTRICITY SUPPLY DEPARTMENT PROVINCIAL TRAMWAYS 1/- TOURIST TICKET 1/- GOOD ONLY FOR ONE RETURN JOURNEY ON EACH ROUTE ON THE DAY AND IN THE CITY OF ISSUE. ISSUED SUBJECT TO THE BY-LAWS															
BALLARAT BENDIGO GEELONG															
1947 1944		1948 1945		1949 1946		Ba		194320							
Sunday		Monday		Tuesday		Wed'day		Thursday		Friday		Sat'day			
Jan		Feb.		Mar.		April		May		June		July		Aug. Sept. Oct. Nov. Dec.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	



Bogie cars 31 and 34 in Moorabool Street at the Ryrie Street intersection Geelong. Trams on the long through North – Belmont route shared waiting time at this city centre location. 14 January 1954. - K.McCarthy

Instead of the third amber warning signal being used to indicate the signal change, a four faced clock with a single sweep hand, faced each traffic direction showing the expired time of the signal sequence. Half the clock face carried a red band and half a green band. As the sweep hand passed from one colour band to the other, the signal lights changed from red to green and vice versa.

At the two main Geelong intersections at Ryrie/Moorabool Sts. and Malop/Moorabool Sts. neon bar traffic signals controlled the traffic. These signals consisted of five red and five green horizontal neon tubes mounted in a metal box attached to the central tramway pole which supported the brackets at the intersections. Four metal boxes were fitted at each intersection facing the oncoming traffic. When the signal's aspect changed, all five green bars would light and at regular intervals one tube after the other would be extinguished. When the fifth and last green tube was cancelled, all the red neon tubes would light up and the cancellation steps would be again followed. A sign reading "GREEN-GO . . . RED-STOP" was clearly displayed below these traffic lights so that visiting motorists could not have a legal reason to ignore their indications.

Although the Bell proposals for the three provincial cities were not fully followed, the Transport Regulation Board did eventually conduct hearings during September and October 1953 into the future of the Geelong undertaking. In spite of public petitions in favour of continued tramway operation, the portion of the Bell report which recommended bus replacement was adopted. The necessary Parliamentary Legislation for the tramway closure was brought down in late 1955 and the closure details were released on 9 December 1955. The replacing buses were not to be under government or municipal control. Three of the existing local bus operators expanded into or diverted existing services along the former tram routes.

Bender's Busways obtained the franchise for the North, Chilwell and Newtown runs; Trans Otway Ltd. received the East, Eastern Park and West Geelong operations, while Corio Buslines replaced the Belmont route to the south.

As with the other provincial tramways, Geelong closed while at a maximum route mileage (of 12¼ miles) and with its maximum rolling stock strength (of 31 plus the track scrubber car). The system closed in the following order:-

Route From City To:-	Last Day Of Service	Last Car In Use
East	8 January 1956	18
West	8 January 1956	7
Chilwell	8 January 1956	1
Beach	8 January 1956 regular service	1
Eastern Park	22 January 1956	19
Newtown	22 January 1956	18
North	3 March 1956	6
Railway Station	23 March 1956	18
Beach	24 March 1956 as required	33
Belmont	25 March 1956	33, 38, 31, 4
Depot	25 March 1956	33, 38, 31, 4

Only four bogie cars remained for the heavy loading on the final day, these were numbers 31, 33, 36, 38. Bogie cars 32, 34, 35, 37, 39, 40 had been transferred to Ballarat and Bendigo during late January 1956.

In the immediate post World War II days the following services were through routed, Eastern Park being the only City to terminal workings:-

Newtown to Railway/Beach.

West to Railway/Beach.

Belmont to North.

East to Chilwell.

With a timetable reorganisation of 1 December 1952, which saved vehicle-miles and reduced headways, the through route pattern was altered to:-

East to West.

North to Belmont.

Eastern Park to Newtown.

Chilwell to Beach/Station.

Newtown to Eastern Park.

After the closure of the Geelong tramways, bogie car 38 was obtained for static preservation at Queens Park, but the car suffered from vandalism and was soon scrapped. With the closure of the Ballarat tramways in 1971 former Geelong car 40 returned for preservation in Queens Park, this time behind a security barrier. This tramcar carries Geelong number 40 on one end and its Ballarat number 43 on the other.

The closure of the Ballarat and Bendigo tramways did not rapidly follow as expected. The transfer of



*Car 7 in Ryrie Street at the Moorabool Street intersection in Geelong city.
The neon bar traffic signals can be seen on the centre pole.
14 January 1954. - K.McCarthy*

SPECIAL NOTE.

PASSENGERS WOULD FACILITATE TRAFFIC BY—

Noting that Check is nipped in correct destination space.

Always keeping Check ready for inspection throughout the journey.

Destroying the Check after leaving Tram.

Distinctly Hailing Tram at stopping place.

Waiting for Passengers to alight before boarding Tram.

Not Standing at entrance to Tram.

Having the Correct Fare ready for Conductor Promptly and clearly notifying Conductor of desired destination.

Assisting the Motormen and Conductors to the observance of Bye-Laws and Regulations.

Immediately reporting to the Office any complaints against Commission's servants.

The Commission accepts no responsibility for any delay or irregularity which may occur from any cause whatsoever, and reserves to itself the right to alter this time-table or destinations without notice.

Issued subject to the By-Laws.
STATE ELECTRICITY COMMISSION OF
VICTORIA.
CORIO TERRACE, GEELONG

Henwood & Dancy Print.



State Electricity Commission of Victoria.

(Provincial Tramways)

OFFICIAL TIME TABLE GEELONG No. 45

(Cancelling all previous time-tables.)

ELECTRICITY SUPPLY DEPT.
and
TRAMWAY OFFICES.

CORIO TERRACE - - GEELONG

OUT To EASTERN PARK

Night Sign:
BLUE & WHITE

SATURDAY

6.40 a.m.	11.0 "	1.48 "	7.0 "
7.0 "	11.12 "	2.0 "	7.12 "
7.35 "	11.24 "	2.24 "	7.24 "
7.55 "	11.36 "	2.48 "	7.36 "
8.15 "	11.48 "	3.12 "	7.48 "
8.35 "	12.0 noon	3.36 "	8.5 "
9.0 "	12.10 p.m.	4.0 "	8.30 "
9.24 "	12.20 "	4.24 "	9.0 "
9.36 "	12.30 "	4.48 "	9.24 "
9.48 "	12.40 "	5.12 "	9.48 "
10.0 "	12.50 "	5.36 "	10.12 "
10.12 "	1.0 "	6.0 "	10.36 "
10.24 "	1.12 "	6.24 "	11.0 "
10.36 "	1.24 "	6.36 "	11.50 "
10.48 "	1.36 "	6.48 "	

IN EASTERN PARK

6.50 a.m.	11.12 "	D2.0 "	7.12 "
S7.12 "	11.24 "	2.12 "	7.24 "
7.45 "	11.36 "	2.36 "	7.36 "
8.5 "	11.48 "	3.0 "	7.48 "
8.25 "	12 noon	3.24 "	D8.0 "
8.45 "	12.10 p.m.	3.48 "	8.15 "
9.12 "	12.20 "	4.12 "	8.45 "
9.36 "	12.30 "	4.36 "	9.12 "
9.48 "	12.40 "	5.0 "	9.36 "
10.0 "	12.50 "	5.24 "	10.0 "
10.12 "	1.0 "	5.48 "	10.24 "
10.24 "	1.12 "	6.12 "	10.48 "
10.36 "	1.24 "	6.36 "	12.0 "
10.48 "	1.36 "	6.48 "	M'night
11.0 "	1.48 "	7.0 "	

O U T To NEWTOWN

From Railway Station or Beach.

5

Night Sign:
GREEN.

MON. to FRI.

D6.50 a.m.	11.52 "	S3.24 "	\$7.0 "
D7.6 "	S12.0 noon	3.36 "	7.12 "
S7.22 "	S12.12 p.m.	S3.48 "	7.24 "
S7.38 "	S12.26 "	4.0 "	S7.36 "
S7.54 "	S12.36 "	S4.12 "	S7.48 "
S8.10 "	S12.48 "	4.24 "	S8.10 "
S8.26 "	S1.0 "	4.36 "	S8.30 "
8.42 "	S1.12 "	S4.48 "	8.50 "
S8.58 "	1.24 "	5.0 "	S9.10 "
S9.15 "	S1.36 "	S5.12 "	9.30 "
S9.30 "	1.48 "	S5.24 "	S9.50 "
S9.50 "	2.0 "	S5.36 "	10.10 "
10.10 "	S2.12 "	5.48 "	10.30 "
10.30 "	2.24 "	6.0 "	O10.45 "
10.50 "	S2.36 "	S6.12 "	O11.0 "
11.12 "	2.48 "	S6.24 "	O11.15 "
11.24 "	S3.0 "	S6.36 "	
S11.36 "	3.12 "	6.48 "	

O Malop Street Only.

(Subject to terminating times of entertainments, but not later than 11.15 p.m.)

S Denotes Station (May be diverted to Beach)

D Denotes Depot.

eight bogie cars from Geelong to the other systems eased the rolling stock situation and enabled trams in poor condition to be withdrawn from traffic. In addition Geelong supplied a cheap source of spare parts which also enabled the Ballarat and Bendigo systems to continue in service for another 15 years.

Had the tramways of Ballarat and Bendigo closed in the late 1950's it is doubtful if portions of those systems would have been retained for tourist working. Thus Geelong was the sacrifice which enabled the other two undertakings to continue into the era of heritage preservation thus extending their partial operation into the indefinite future.

Readers wishing to research the history of the Geelong tramways are referred to the following articles prepared by K.S. Kings:-

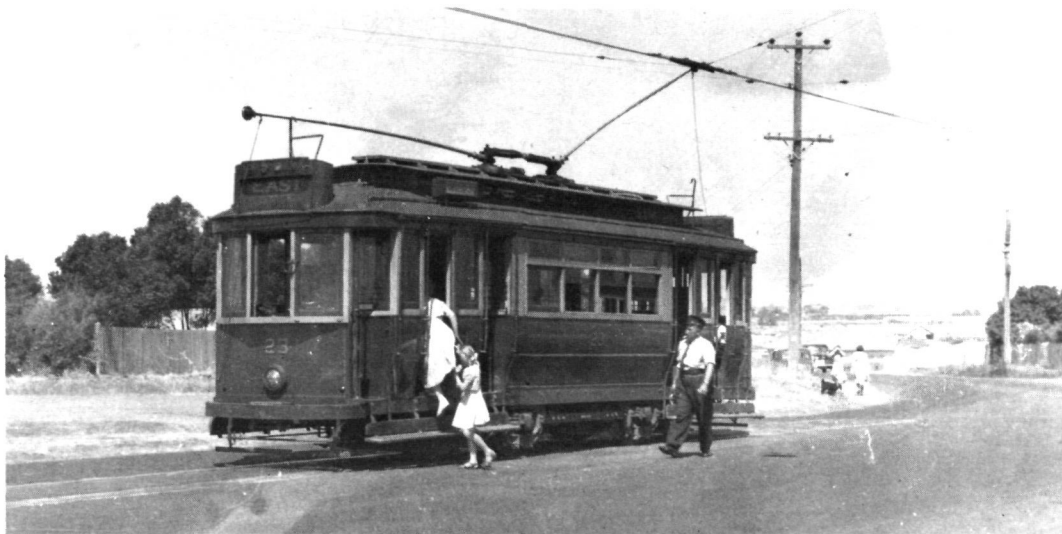
"Electric Traction" March, April 1956.

"Running Journal" January 1966.

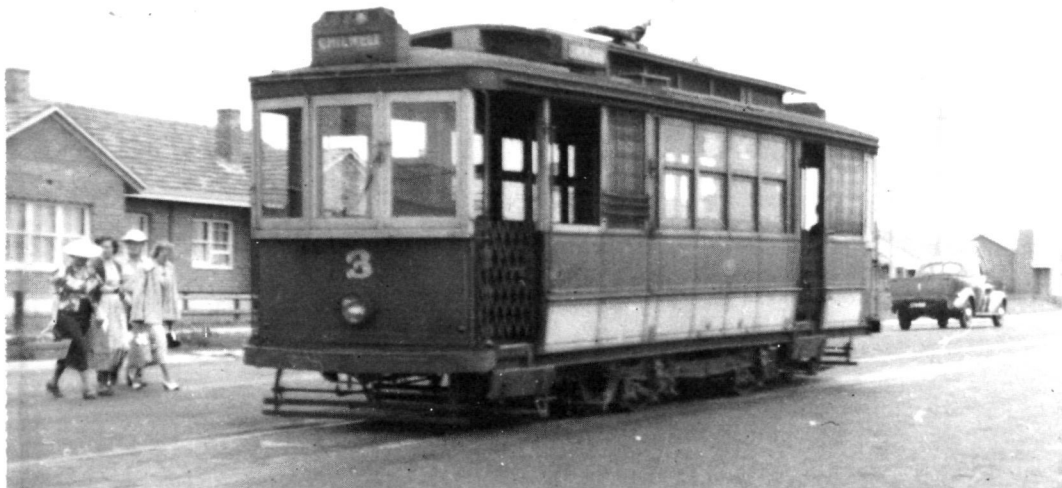
"Trolley Wire" April 1976.

This brief article has been compiled by K. McCarthy. Acknowledgement is recorded of the large amount of data provided by the late W. Jack of Ballarat through a considerable volume of correspondence conducted with the present writer.

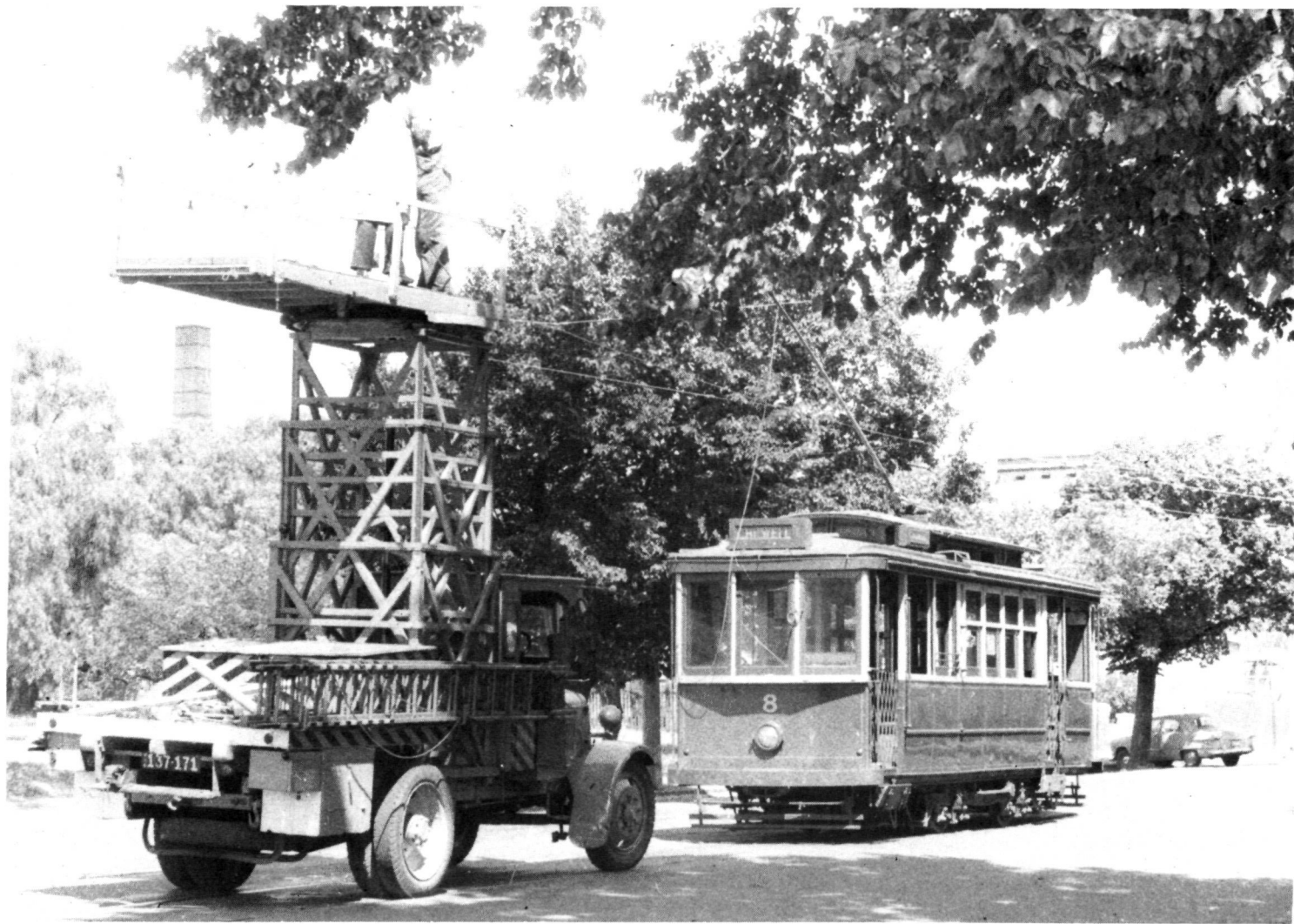
Roster details were provided by the late W. Jack and Ross Willson.



Pengelley car 23 at Boundary Street, East Geelong terminus, looking south east. This was the highest numbered car built new for Geelong. 14 January 1954. - K.McCarthy



Car 3 at Boundary Street, East Geelong terminus, looking towards Geelong. This car retained the pre World War 2 colour scheme. 5 January 1951. - K.McCarthy



Car 8 and the SEC tramway tower wagon at Beach terminus, Geelong 14 January 1954. - K.McCarthy

TROLLEY WIRE

APRIL, 1981

All trams were scrapped at Geelong unless otherwise indicated.

Details of cars obtained second hand by the Geelong Tramways and the disposal of tramcars for further use:-

Geelong No.	Former Operator	Date in original service	Builder	Date at Geelong or sale date	Disposed to	Date at new location or sold
24	M&MTB 67 "J"	1915	Meadowbank	3-1928	Scrapped Geelong	1956
25*	P&MTT 67					
	M&MTB 66 "J"	1915	Meadowbank	3-1928	Scrapped Geelong	1956
	P&MTT 66					
26	M&MTB 64 "J"	1915	Meadowbank	3-1928	Scrapped Geelong	1956
	P&MTT 64					
27	M&MTB 71 "J"	1915	Meadowbank	3-1928	Ballarat 2nd 12	1935-6
	P&MTT 71					
28	M&MTB 65 "J"	1915	Meadowbank	3-1928	Ballarat 2nd 11	1935-6
	P&MTT 65					
29	M&MTB 75 "J"	1915	Meadowbank	3-1928	Ballarat 2nd 14	1935-6
	P&MTT 75					
30	M&MTB 68 "J"	1915	Meadowbank	3-1928	Ballarat 2nd 13	1935-6
	P&MTT 68					
27	2nd MTT 303 "G"	21-12-1925	Brill-Birney	17-1-1936	Bendigo 27	16-12-1947
28	2nd MTT 304 "G"	26-12-1925	Brill-Birney	24-1-1936	Bendigo 28	9-9-1947
29	2nd MTT 302 "G"	16-12-1925	Brill-Birney	6-2-1936	Bendigo 29	28-5-1947
30	2nd MTT 301 "G"	16-12-1925	Brill-Birney	30-1-1936	Bendigo 30	20-5-1947
31	M&MTB 118 "N"	14-4-1916	Duncan & Fraser	13/15-1-47	Scrapped Geelong	1956
	HTT 12					
32	M&MTB 122 "N"	7-4-1916	Duncan & Fraser	8/9-9-1947	Bendigo 2nd 1	Jan. 1956
	HTT 16					To Ballarat 5-10-60 as 2nd 37
33	M&MTB 120 "N"	7-4-1916	Duncan & Fraser	15/16-9-47	Bendigo 3rd 4	March 1956
	HTT 14					
34	M&MTB 126 "N"	7-4-1916	Duncan & Fraser	15-12-1947	Bendigo 3rd 2	Jan. 1956
	HTT 20					
35	M&MTB 119 "N"	13-4-1916	Duncan & Fraser	20/21-1-48	Bendigo 3rd 3	Jan. 1956
	HTT 13					
36	M&MTB 26 "C"	16-5-1913	Duncan & Fraser	10-8-1948	Bendigo 3rd 5	March 1956
	P&MTT 26			23-12-1948 in service		
37	M&MTB 38 "C"	8-4-1914	Duncan & Fraser	23-4-1951	Ballarat 42	Jan. 1956
	P&MTT 38			12-1951 in service		14-2-56 in service
38	M&MTB 37 "C"	25-4-1914	Duncan & Fraser	15-5-1951	Sold ex Geelong	1956
	P&MTT 37			in service 1952		
39	M&MTB 39 "C"	3-4-1914	Duncan & Fraser	5-6-1951	Ballarat 41	Jan. 1956
	P&MTT 39			in service 12-1951		15-2-1956 in service
40	M&MTB 40 "C"	23-4-1914	Duncan & Fraser	19-6-1951	Ballarat 43	Jan. 1956
	P&MTT 40			1952 in service		29-3-1956 in service
14	New	27-8-1924	Brill-Birney	27-8-1924	Bendigo 2nd 11	11-8-1948
15	New	29-9-1924	Brill-Birney	29-9-1924	Bendigo 2nd 15	16-6-1949

Notes

* - Renumbered 3rd 28 at Geelong in 1951.

M&MTB - Melbourne & Metropolitan Tramways Board.

P&MTT - Prahran & Malvern Tramways Trust, Melbourne.

HTT - Hawthorn Tramways Trust, Melbourne.

MTT - Metropolitan Tramways Trust, Adelaide.



THE CW5, W5 AND SW5 TRAMS OF MELBOURNE

A CLASS HISTORY

by Norm Cross

The 125 trams of the W5 class were especially built along mass production lines, for the electrification of the Elizabeth St. cable tramway. In 1934, four completely new styled all-steel bodies, which were to be the forerunners of an eventual similar 325 trams, were constructed at Preston Workshops. Because of the prevailing depression at the time, it was decided to equip these bodies with secondhand trucks and control equipment from obsolete timber framed C class trams (ex Prahran and Malvern Tramways Trust cars of 1913). Nos 681 to 684 were classified CW5 and were fitted with the GE K35JR controllers (4 series and 4 parallel notches), and Brill 22E maximum traction trucks, each truck fitted with a single 65 hp motor (GE201 type). A fifth CW5 car No 685 was built in 1935. 34 further cars of the same specifications were placed on order.

Very early in operation, the CW5s proved quite unsatisfactory. They were grossly underpowered, swayed alarmingly at speed, cornered roughly and derailments were common. Because of these features they were quickly banished from heavy City traffic. They were initially used at Camberwell depot on the Burwood and Wattle Park routes. In 1941 they were transferred to Malvern depot for use on route 69 (Kew-Cotham Rd to St. Kilda) and the discontinued St. Kilda Beach to Caulfield route 67. In 1954 the CW5 cars were transferred to Essendon depot to work on the Moonee Ponds to Footscray route 82. After a spectacular accident at Maribyrnong in 1955 in which 682 was overturned, the CW5s were withdrawn for conversion to W7 class, however the conversion was reduced to that of a standard W5 class.

At the same time that 685 was being built, an

The CW5 class leader, 681, in Hawthorn Road at Balaclava Road Caulfield North (Balaclava Junction). Still working from Malvern Depot, it was nearing the end of its service in this form when photographed on 11 April 1955.

- K.S.Kings

equal wheel four motor car with an improved seating layout was being built into an identical body shell as 685. This body was numbered 725 and was fitted with EEQ2CK1 cam controllers (better known as Clydes). These controllers were tried out in W2 car 643, the only W2 so fitted. On completion of fitting out of 725, the sample No. 15 trucks had not been completed, so 725 was equipped with 26½ inch dia. wheeled No. 1A trucks with MV101AX motors from a W2. It ran in this form for five months. Nos. 736 to 745 and 754 were constructed after 725 to the same specifications but with No. 15 trucks and placed in service in 1935. The order for CW5 cars Nos. 686 to 719 was cancelled and the numbers left blank in the car lists. The bodies of Nos. 686 to 690 had been started, they were completed as standard cars and numbered 720 to 724. These cars differed from other W5's by having plywood roofs, all other cars having maple or oregon roof slats. The drop centre compartment seats also differed, being the same as the CW5s.

The design features having been finalised production stepped up and the cars entered service in

the following order —

- 1934 681-684.
- 1935 685, 725, 736-745, 754.
- 1936 720-724, 726-735, 746-753, 755-785, 787-789.
- 1937 786, 790-796, 799-801, 808-820.
- 1938 797-798, 802-803, 821-838.
- 1939 804-807, 839.

Ten further W5 cars (840-849) were projected for construction in 1939. The first three cars were commenced and built to an advanced stage. Concurrently with the construction of 840 an experimental prototype luxury tram with air operated sliding doors was being assembled. This car was numbered 850. Construction of this car was put forward at a faster rate because of its advanced design. The decision was made to modify the W5 cars under construction to include some of the features of 850. Nos. 840 to 842 were altered in the centre section and sliding doors and metal framed windows installed. No's 843 to 849 were constructed from the outset to the improved design



The lowest numbered W5 (excluding CW5 rebuilds), but not the first built, 720 is seen in original form, with square outer windscreen top corners and centre doors. This represents the classic W5 appearance. - W.S.Parkinson

which was classified SW5 and entered service in 1939 except 849 which was delivered in 1940.

Allocations

Although built for the Brunswick depot routes, cars 720 to 745 and 754 were run-in for their first month or so on the Camberwell depot routes. No. 738 for some reason unknown never went to Brunswick, remaining at Camberwell until it's recent displacement by the Z class cars. Initially, the W5 class cars were based at either Brunswick or Essendon depots. With the allocation of two groups of SW6 cars to Brunswick, in 1940-41, cars 720 to 727, 729-730 and 772-777 were re-allocated to Southern and Eastern depots. No. 772 was returned to Brunswick in 1955. Several of Essendon's W5 cars were also transferred around this time, cars concerned being 803, 808, 810-812, 814-816, 819, 821-826. Some of these cars were transferred to Preston and Coburg depots. Nos 780-782 were transferred from Essendon to Preston in 1946 being replaced by SW6s 907-911. A number of other cars have left Essendon and Brunswick over the years making the W5 cars now well scattered around the system. 27 W5s still remain at Brunswick and 40 at Essendon.

The SW5 cars entered service at Hawthorn depot. In 1945 845-847 were transferred to Malvern. In 1949 842 was transferred to Preston and 844 to Malvern. On closure of Hawthorn depot the SW5s were transferred to Kew except 849, to Camberwell and finally in 1978 to Kew.

Body Variations

W5 cars featured two distinctly different end appearances. Nos 681 to 685 and 720 to 809 were built with square corners to the tops of the windshields. Nos 810 to 839 were built with curved corners to the outer edges of the windshield tops (similar to SW6 class but with fixed side windows and movable centre sash). In 1963 following a collision 784 was fitted with an SW6 windshield with half drop side windows. From this time, all replacement windshields on W5 cars were of the SW6 pattern. No 781 received the last new standard windshields in 1967. As of October 1980 only cars 721, 736, 774, 781 and 798 retain square windshields at both ends, and 829 and 837 have rounded type on both ends. Many cars retain an original windshield on one end only. No 740-809 had self balancing saloon sashes. They were converted to the normal form from 1957 to June 1967, 759 being



The last thirty W5s were built with curved outer windscreen top corners similar to those applied to the SW6 class. 831 is seen in original condition. - W.S.Parkinson



SW5 847 has received SW6 half drop type windscreens and the latter addition of multiple lights on each side of the dash panel and is externally indistinguishable from the SW6 class. - Peter Hallen

the last car with balanced sashes.

In 1951, 681 was fitted with a semi-lined ceiling in which masonite inserts were placed over the roof slats between the roof ribs. No 782 was fitted with a lined ceiling in 1952 at the same time ceilings were being fitted to the W4 class. This ceiling was similar to that in PCC car 980 in that it featured a centre ventilator grill full length. Eleven years were to pass before another W5 car was to receive a ceiling. All W5s without lined ceilings had the underside of their roof boards spray painted in Colorflek paint between 1960 and 1964. No 801 also had its upper bulkhead panels painted in Colorflek.

In 1963, 820 was fitted with a laminex ceiling of a different design. Subsequently, nine other cars - 721, 722, 729, 731, 749, 752, 754, 788 and 836 were fitted with the laminex ceiling in 1963-64. All these ceilings remain but several were modified in 1977-79. In 1962, 769 was fitted with painted masonite interior side linings, which became the standard for a decade.

No 721 suffered damage to the centre section of its plywood roof in 1964. The roof was rebuilt using oregon slats whilst plywood was retained for the side wings. The unusual appearance is hidden from the passengers by its lined ceiling. Plywood roof

cars 722 and 724 have had their roof ventilator sections renewed with new plywood. Several cars have had the roof exteriors spray painted with Envelon Liquid Plastic material to seal against leaks. Three cars, 681, 729 and 814 have had roofs recanvassed.

No 727 was rebuilt in 1969 with the centre doorway panelled and glassed in. It retained all the standard W5 features of the time other than this modification. Over two years were to pass before a second car No 733 was to get a modified centre; 733 was completely repanelled at this time with 16 gauge galvanised steel panels, the first steel car to be repanelled. 733 set a pattern for other cars of the W5 to W7 classes in body overhauls. Thus the die was cast with 733 for the updating and improvements to the remaining W5 cars, including upholstered seats in the drop centre compartment, removal of the centre doorway and an improved lined ceiling. To October 1980, 76 cars have had the centre doorways removed. 64 of these cars have upholstered seats in the centre compartment and 71 cars have had lined ceilings fitted. Most of these cars have also had the saloon and centre compartment walls and bulkhead panels lined in teak or walnut veneer laminex. Improved barrier rails have

also been fitted. All of this modernisation has been done in a little over 7 years.

Many of the features of the W5 class were retained in the SW5s, the seating and interior linings, aprons and windshields being the same. As with the W5s the windshields on these cars have changed, 847 retaining one of the original type as late as 1964. The SW5s did not receive the dash canopy lighting as fitted to 850 and later cars, retaining the standard centre mounted headlights. No. 850 also featured different seating and linings.

No. 840 was an odd car, with non-standard entrance bulkheads and bulkhead stanchions. It was the only sliding door car built without a lined ceiling. In 1949, 840 was utilised for trying out features to be used in an experimental PCC car. Alterations included completely new lighting circuits with six lights in each saloon and centre compartment. New longitudinal upholstered seats were installed in the drop centre. A painted full-length stanchion protected the ends of this seat, later cars of this design seating having full semi-bulkheads at the seat ends. No 840 has been used on several occasions by Technical Services Branch on testing of various forms. No 840s centre seats were very low and uncomfortable. In June 1976, 840 was heavily modernised, a lined ceiling was fitted and new style stainless steel stanchions and transverse upholstered seats of the present standard pattern were installed. Existing lighting and the semi-bulkheads were retained. Nos 844, 846, 848 and 849 have been modernised with upholstered centre seats and laminex linings. SW6 type plastic covered stanchions have replaced the W5 type pipe stanchions on modernised W5 and SW5 cars. No 842 was fitted with a prototype set of M&MTB door engines in 1949, these engines were introduced in later cars. No. 842 was fitted with a fibre glass apron from June 1966 to August 1968.

Electrical and Mechanical

Electrically the W5 cars fall into two groups, Direct Control and Remote Control cars. The Direct Control cars are fitted with English Electric Q2CK1 controllers built locally by both Clyde Engineering Co. and the M&MTB and known as 'Clydes'. The Remote Control cars are fitted with English Electric Q2RC1 or M&MTB RC2 control. Cars 681-685, 740-741, 750-751, 785-786 and 797-839 are the cars fitted with remote control.

Originally, most of the RC1 and RC2s were 'Pan Handle' controllers, in which a lever was moved back and forth through a small arc, driving the main segment drum through a toothed sector and pinion. No 834 was modified in August 1938 with a large rotary handle driving the segment drum through hypoid gears; 834 was further modified in May 1948 to standard handles and star wheels. Conversion of 'pan handle' controllers commenced in 1945 and was completed in 1953 when 800 was the last car modified.

There were 4 odd W5s; Nos 740 and 741 were

fitted new with Westinghouse VA (Variable Acceleration) control and 50 HP Westinghouse 1426M motors fitted to standard No 15 trucks. These two cars were standardised with RC2 control equipment in 1948. Nos 750 and 751 were fitted with General Electric PCM Control but retained standard motors. These controls have 3 notches only and control the speed and acceleration by relays and contactors under the car dependant on the position of the controller handle. Nos 750 and 751 were transferred to the Moonee Ponds to Footscray route from 1956 until 1978 when they were finally converted to RC2 equipment using second hand components from written off W2s 476 and 550. Several Clyde Controller cars have been rewired, retaining the Clyde Controllers.

Cars 681 to 685 had experimental modifications to internal lighting circuits between 1935 and 1951 all were standardised by 1966. For 13 years, from December 1938 to January 1952 736 was the "odd" W5, being the only car of the class fitted with dash canopy headlights. These headlights were standard on the SW6 class cars. In September 1971, 683 was the first W5 fitted with multihead and tail lights. The remainder of the W5 fleet were



Pan Handle type EE Q2RC1 controller as originally fitted to W5 823. 7.2.51. - K.S.Kings



In a further body variation, W5 798 retains the square windcreens (at both ends) and the centre doorways, but has the extra head and tail lights.

-Peter Hallen



W5 836, with centre doorways panelled over and multiple lights on the dash panel, represents the present appearance of the majority of the class.

-Peter Hallen



W5 799 has SW6 type windcreens and the extra head and tail lights but retains the centre doors. - Peter Hallen

fitted with these lights by mid 1972. Fluorescent lights were fitted into the destination boxes of 685 and SW5 844 for improved rear end illumination. These boxes cannot be used in any other cars.

No 826 was the first W5 to receive trucks fitted with double-helical gears in 1959 and 790 was the last car with straight (spur) gears in 1969. No 780 was fitted in 1949 with copper tubing throughout its airlines which it still retains. Four W5 cars have run on "Bourke Street" type resilient wheels, 750 and 751 (1964-66), 757 (1970-71) and 738 was fitted in 1979.

Service History

Unfortunately the W5 class trams have had their share of accidents. No 787 was badly damaged at Essendon Airport in September 1952. It was stored until 1956 when it was totally rebuilt to a new design. It retained its Clyde controllers and square windshields also its W5 entrance bulkheads, but with the doors removed. No 787 was fitted with sliding doors, metal framed windows, longitudinal upholstered seats in the drop centre with semi-bulkheads and was reclassified SW5 class. In April 1956, 785 was destroyed by fire at Newmarket Railway bridge. Only one saloon remained recognisable. The trucks and some mechanical components were salvaged. The body was totally rebuilt in seven months to a design exactly the same as the W7 class cars in production

at the time. No 785 was reclassified as SW5 despite this fact. Both 785 and 787 were rebuilt using components made for cancelled W7 class trams. Both of these trams were sound insulated in their walls and ceilings. No 803 was prematurely scrapped in August 1961 after one side was torn out in a collision in Sydney Road Brunswick. No 813 was virtually broken in half when an 18 ton truck hit it dead centre at Elliot Avenue Royal Park in 1964. Its remains were scrapped in July 1966. Miraculously only one person died as a result of these two accidents. No 743 was heavily damaged and half burnt out following a tragic semi trailer accident in St. Georges Road Thornbury in 1970. It was repaired in 1971 and bears no evidence of the incident today. Other W5's repaired after heavy accident damage in the past twenty years include, 682, 740, 741, 751, 755, 780, 791, 805, 822 and 824. In May 1977, 681 was badly damaged in an accident in Maribyrnong. It was stored awaiting legal settlement. Repairs have commenced on this tram and it will return to traffic in late 1980 still as a W5 car.

No W5 car has ever been decorated, illuminated or given a special paint treatment. In 1958, 772 was used newly painted and fitted with colourful all-over advertising promoting Heinz Foods. It ran on all routes in this form except Bourke Street, the advertisements being transferred to SW6 car 967 for service on this route.



787 is one of two W5 cars rebuilt to SW5 after accidents. When it re-emerged in 1956 it retained the square windscreens but it now carries SW6 type as well as the multiple lights on the dash panels. -Peter Hallen

No 774 was used in a segment of a World-wide Television link up, running out as first tram from South Melbourne depot at 5.20 am on 26 June 1967. This telecast was picked up by most countries including the communist sector. No 813 was used as a camera car and featured in a scene in traffic in Elizabeth Street in the city for the motion picture "On the Beach" made in 1959. For some reason 818 had its number painted above its headlights from March 1960 to September, 1963.

No 841 was the first sliding door tram to run two million kilometres in Melbourne in March 1977. The first W5 tram 725 commenced running 18 May 1935, the last W5 839 commenced running 28 April 1939. This was an admirable achievement at a time of economic depression, unstable working conditions and looming war. The most travelled W5 tram is 774 which has clocked up 1,420,000 miles (2,285,000 kilometres). The lowest mileage W5 is 825 which has run 1,022,000 miles (1,645,000 kilometres). With the present upgrading of the W5 trams, these efficient trams are likely to still be serving the travelling public of Melbourne for many more years to come.

NOTE: This article was compiled and written by Norm Cross of Preston Workshops, with valuable assistance from Workshops Officers John Scholtz

and Graham Jones. Written October 1979 with corrections to October 1980.

General Dimensions of W5 and SW5 Classes

TYPE: W5:- Bogie Drop Centre combination, being converted to saloons.

SW5:- Bogie Drop Centre saloon trams.

CAPACITY PASSENGERS: 52 seats; 98 standees except 785 and 787, 48 seats 102 standees.

TRUCKS:- MMTB No. 15 Rolled steel frames, 28 inch wheels.

MOTORS:- 4 x 40 hp General Electric 247AX2.

CONTROLLERS: English Electric Q2CK1 Cam (Clydes) Nos. 720-739; 742-749, 752-784, 787-796.

English Electric RC1 No 786, 797-803, 808-838.

MMTB RC2 Nos 681-685, 740-741, 750-751, 785, 804-807 and 839-849.

LENGTH:- 46 ft 6 ins

WEIGHT:- 15.8 to 16.2 tons (W5 class), 16.9 to 17.2 tons (SW5 class)

WIDTH:- 9ft over running boards, 8 ft 4 ins over roof drip rails

HEIGHT:- Rail to Roof, 10 ft 4 ins

CITY SECTION

News of the Melbourne and Metropolitan Tramways Board

BUSES

All except 12 of the new MAN buses, with Ansair bodies were to be delivered from the supplier as at early March. The most likely allocation will be:

Doncaster Depot 100-109, 120-197 (88)

Footscray Depot 110-119, 120-197 (42)

The latter depot will retain 16 AEC Mk4 buses.

Work has commenced at Footscray bus depot to remove the former tram running shed, together with the original bus servicing bays and other older structures on the site except the bus cleaning area. A new office, amenity block and service shed will be built on part of the site and a greatly enlarged paved standing area will be available.

TRAMS

Driver training on Z3 cars commenced at Camberwell Depot on Monday 23 February using car 131. The first route worked by this depot to use these cars was 75, East Burwood-City, from Monday 16 March. It is expected that 131-146 will be allocated to Camberwell.

The body of Z3 169 was received from the builders in mid March. The latest tram in service is 163.

It is understood at this stage that Z type cars will commence running from Essendon Depot on West Maribyrong/Essendon Airport routes on Monday 27 April.

W5 cars 807 and 721 have re-entered service with the centre doorways removed and modernised throughout.

Brunswick W2 282 has been fitted with a roof mounted current collection testing device.

This car operates through the busiest sections of the system, Swanston Street and St. Kilda Road on routes 1 and 15.

Derail instruction car W2 221 has been supplemented by W2 587 which has been in storage at South Melbourne Depot for many years. It is to be fitted with extra long motor leads for this purpose. The derail instruction car was introduced in November 1963 when W2 295 was converted for this purpose. 295 was replaced by 267 in November 1967 which in turn was replaced by 221 in February 1970. These cars had the no. 1 bogie at one end replaced by a no. 13.

TRACKWORK

The major track renewal job in Bridge Road Richmond between Church and Hoddle Streets, together with a short extra length to Simpson Street East Melbourne, was completed on Thursday 19 March.

Repacking and alignment of the railway/tramway crossings at Kooyong and Gardiner was carried out in late February and early March. This work was necessary following severe buckling during the January heatwave. A new crossing is presently being manufactured for installation at Gardiner.

The last remaining section of tramline to be laid in wooden blocks, on the Toorak line, between Punt Road and Chapel Street are to be replaced with mass concrete.

The crossover in Brunswick Street Fitzroy at Barkly Street on the West Preston line was removed on Monday 13 April. This crossover was used many years ago in conjunction with the long since banished Holden Street shuttle service.



ADELAIDE TRANSPORT NEWS

STA track gangs have completed relaying both tracks on the Glenelg tramway between Greenhill Road and South Terrace. The job, which involved continuously thermit welded rail in place of the jointed rail previously used, was carried out by initially laying a third track on a new alignment adjacent to the original down track. After this was cut into traffic, the adjacent track was then removed and replaced by a new track and subsequently the remaining original up track was removed. The new tracks were cut in on Sundays, buses being used to connect with trams between the City and Forestville. Three trams were parked at Forestville overnight to run the Sunday service to Glenelg.

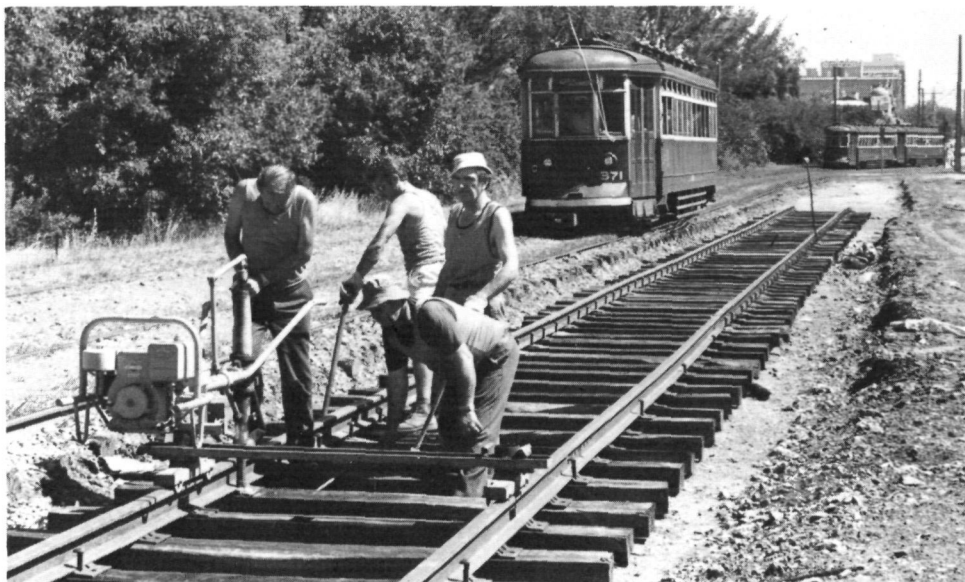
Two of the three most recently refurbished & type cars, 370 and gold 377 were substantially damaged in a collision between two coupled sets in the evening peak hour in February. Car

377 will require a new roof over the motorman's cabin. The result is that both remaining silver sets, 360/378 and 361/362, continue in regular morning peak hour use. Car 351, which had run coupled with 377 since its refurbishment for the Glenelg Jubilee, is now running with 369. Car 379 is now emerging from the refurbishment programme and has its end numbers located between the headlights as on 351.

The STA has ordered 160 new MAN buses for use on inner suburban 'silver' routes. These buses, the first of this make ordered in Adelaide will replace the earliest AEC Swifts which were built in 1970-72.

Maylands Depot, following cancellation of its earlier sale by auction as a result of it being listed on the provisional State Heritage Register, was put up for auction in March 1981 and has been sold.

ANR perway staff, 'made available' to the STA, are laying track on a new alignment near South Terrace on the Glenelg tramway. - Ian R. Hammond



LEFT: One of the two new 'Platform Waggon's' at work in St. Georges Road at the Thornbury crossover. 6.3.81. / K.S.Kings

★ Museum Notes and News



Electrail

No, it is not another railway or tramway society, but the name of a special committee set up by Steamrail Victoria (itself a joint venture of the ARE and ARHS) to undertake electric train preservation.

A meeting was held on Wednesday 3 December 1980 at the ARHS archives office on Windsor station. The meeting was very well attended, particularly when one considers that Melbourne's electric trains were not running that day! A committee of four was appointed to look into the feasibility of electric train preservation.

Over the years there have been a number of Victorian Railways electric cars set aside for preservation, but it is only recently that a site has been found to store cars and locomotives. This is at the old tarpaulin factory at Newport. Through the auspices of Steamrail restoration of electric stock will be undertaken here.

At the present time there are seven cars awaiting restoration. These are a five car swing door set containing two motor cars, 107M, 137M, two driving trailers, 24D, 32D, and trailer 12BT; the latter being the oldest passenger car in service on the VR when it was withdrawn in 1973.

It was built in 1887. Tait 'Ringer' trailer 350T and prototype trailer 201BT are also at Newport.

Unfortunately all cars have suffered at the hands of vandals and the weather. A close inspection of the swing door set was made over Christmas 1980 and it was found that most of the vandalism was confined to the driving compartments where switchgear, controllers and other items were wrecked, as well as most windows broken.

A start was made at the end of January on the restoration of 107M. All broken glass has been removed and stripping the car interior commenced. Some timberwork on the exterior has been replaced. Preparation for repainting was well in hand by the end of March. When completed, 107M will have the former wooden seating arrangement, as did all second class suburban cars of this type until 1958. As work progresses a number of interesting features are being uncovered under many coats of paint and numerous alterations.

Tait driving trailer 230D is being acquired to temporarily run with 107M as a two car set until swing door car 24D is restored.

BYLANDS . . .

Tramway Museum Society of Victoria



The work of erecting the trolley wire is progressing at a steady pace with all eastern bracket arms and northwards to and beyond the stores area having already been completed. The western bracket arms, together with the securing and tensioning of the wire, was due to be completed by the end of March. The next stage is to wire into the depot from the main line.

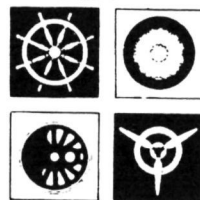
Four of the six equipment stands in the substation have been erected and wiring work has commenced.

Preparation for electric tramcar operation has begun with the servicing of the GE K35JJ controllers of W3 667. More work on this car has yet to be undertaken, whereupon W4 673 will be

taken in hand.

Myer Northland invited the Society to participate in a promotion called *Salute to Australia* which was held in the Centre Mall of the shopping Centre for one week from Monday 16 March. The display consisted of second period uniforms on display dummies provided by Myer, as well as the Society's own framed historical photos, a restored Bundy recorder clock, destination rolls, eight tram models and other related items. The display was very successful and aroused considerable public comment—as it was advertised in many suburban newspapers and on several radio stations.

GLENORCHY . . .



Tasmanian Transport Museum Society



Newly erected signal and station buildings at TTMS Glenorchy Museum. The former Botanical Gardens station building is in the foreground. It is being converted into a signal box.
-D.H.Jones

Development of the Museum continues to be the major part of the Society's activities. Old projects are proceeding while some new ones have been initiated.

NEW TOWN RAILWAY STATION: Over the

summer months the platform area has been constructed, commencing with the excavation and pouring of the foundations. Erection of formwork and pouring of concrete walls followed, after which the walls received a concrete capping which will form the platform edge. All block work is now complete and the whole platform area filled to the required level ready to receive a bitumen seal at a later date. The station building is now resting firmly on the foundation after some adjustments and with the completion of the platform, attention will now turn to re-erecting the verandah canopy. Flooring is being relaid in the waiting room, while a start will soon be made on converting the former store and ladies waiting room into a display area. Storm water drains have been excavated and pipes laid.

The former Botanical Gardens station building has been lifted on to a new block foundation where it will be converted to a signal box.

Other site works which are receiving attention include construction of an additional length of depressed track, the erection of another semaphore signal and the excavation and foundations for a water crane which should be erected in the near future.

The local Council is proceeding well with the filling of an area to the north of the museum and when completed, the boundary fence will be moved outward to include this additional area.

Steam Technology Building

Following an approach by the Society, the Minister for Main Roads has announced a grant of \$3000 towards the cost of erecting a building to house a collection of steam powered vehicles including a DMR road roller and traction engine. The building will be an addition to the electric traction building. Plans are being prepared and construction should commence in June.

MTT Visit

One of the most successful outings made by the Society took place on the evening of 19 February when nearly 60 members and friends inspected the Metropolitan Transport Trust's workshops and other facilities at the Hobart Depot before travelling by Volvo articulated bus to the new \$2.3 million depot established at Mornington, on Hobart's eastern shore.

BALLARAT . . .

Ballarat Tramway Preservation Society



Melbourne Pageant

As reported in *City Section*, TW February 1981, the Society was represented in Melbourne by four wheel tram 27. The Society offers its thanks to those members, both platform and sales staff, who spent long hours in performing their tasks and who made the Society's efforts successful.

Trackwork

The rails to go over the pit on 5 road were moved into the shed during the weekend of 17/18 January 1981; these rails will be welded to the supporting columns.

The welding of the 4 road track was completed during the weekend of 21/22 February by Ted Quillin of Ballarat CAE, assisted by members Andrew Hall and Garry Davey. Dave Macartney and Howard Stoney then commenced the lifting and packing of this track.

A start has been made on laying the curve into 5 road so that maximum traction car 40 can be brought out for the tenth anniversary of the closure of the Ballarat system in September.

The Ballarat City Council has completed a full width repair and reseal, including the tramline, of Wendouree Parade between the Gardens loop and St. Aiden's Drive. Some concern was felt about the possible problem of bitumen on the rails. However this did not occur as the contractors, the County Roads Board, placed a thick layer of sand on the rails and then the entire road was sprayed with emulsion and small size blue metal screenings spread. The sand was cleared from the rails and during the next few days the council's suction cleaner cleared the remaining sand and loose metal from the Parade. Society members completed the final cleaning prior to revenue service.

Overhead

Troughing and trolley have been installed in the new shed above 4 road and has already proved satisfactory as it has been used to run the compressors on 38 and 661.

Outside the new shed span wires have been erected between the existing overhead and across the fan. The contact wire into 4 road was scheduled to be strung on the last weekend of March.

Tramcars

W3 661 has undergone further examination which has revealed that the air compressor will need replacing due to worn piston rings and valves. Work has commenced on painting the roof of this car and minor painting touchups and maintenance on the bodywork have been undertaken.

All the side panels and seats of the drop-ends of 26 have been removed in readiness for rebuilding as a California Combination car. It is intended that this car will be moved into the new shed for lifting. The truck will then be dismantled and all equipment thoroughly examined and repaired where necessary.

Four wheeler 33 has re-entered service after a defective bearing had been cleaned, serviced and oiled. This tram was a welcome sight back onto Wendouree Parade as it provided relief for 14, as 27 was in Melbourne.

Upon return from Melbourne, 27 became the first car to be serviced over the pit on 4 road in the new shed; this facility has made servicing much easier. The no. 2 end trip gate has been rebuilt after being damaged in transport on the return from Melbourne.

W4 671 has been fitted with rear vision mirrors similar to 38 and 40. This was necessary because of the unique type of operation in Ballarat with wrong side loading when trams travel along Wendouree Parade from Carlton Street to St. Aiden's Drive.

Sales Department

DERM badges have been received from the supplier and are proving a resounding success. Orders have been placed with the manufacturer for MAN bus badges, plus a re-order of the *Silver Train* ones. Sales at Flinders Street Station and various other outlets are providing welcome revenue for the BTPS.

ST KILDA . . .

Australian Electric Transport Museum



New Depot Tracklaying

The major task in February – April 1981 has been the laying of the first concrete track into the new display hall. The track extends some 20m outside the building and, initially, at least two car lengths are to be completed inside the depot. This work will allow the Museum to take delivery of car 264 for the joint AETM/SRA project.

Roller On Loan

The STA has agreed to make available on permanent loan to the Museum a small diesel road roller which formerly was part of the per way equipment stationed at Maylands Depot.

Bus Policy Reviewed

At a Special General Meeting held on Friday 22 February 1981, AETM members reviewed the Museum's bus policy following consideration of a report prepared by Colin Seymour.

The meeting reaffirmed its support for bus preservation, but felt in view of the work involved in maintaining and operating the St. Kilda tramway, it would be better if bus preservation was the responsibility of a group separately constituted from the AETM. One option for such a group would be to set up its operations at St. Kilda adjacent to the AETM. The meeting confirmed that the existing trolleybus collection should remain with the tram fleet, particularly as the AETM had the infrastructure necessary to ultimately operate trolleybuses if desired. It was also agreed that AEC Regal 4 623 should remain as part of the AETM collection as an example of the form of transport which replaced the trams.

Annual General Meeting

The Annual General Meeting, the 24th to be held by the AETM, was conducted on 10 April 1981. The following office bearers were elected:

<i>President</i>	J.C.Radcliffe
<i>Secretary</i>	C.A.Andrews
<i>Treasurer</i>	J.W.Hoffmann
<i>General Manager</i>	J.R.Pennack
<i>Committeemen</i>	L.M.Fenner
	R.G.Magnussen
	R.L.Jenkins

The meeting also agreed to examine a proposal to hold a major transport function at St. Kilda, probably in association with the Silver Jubilee of the AETM in 1982. R.White (convenor), M.Skinner, W.J.Burt and Mrs. B.I.M.Whetter were appointed as a sub committee to further develop the idea.

New Transit Map

The STA has recently revised and enlarged its transit route map, with the result that the route of the St. Kilda tramway as well as the Glenelg tramway, is now shown on the map. Three stops are shown, namely, Museum, Mangrove Street and St. Kilda Beach. Notation is identical to that used for the Glenelg line stops.

Mark Skinner uses recently acquired former MMTB (previously ex Sydney) tower waggon 15 for repainting a span pole outside the St. Kilda Depot. -John Hoffmann



FERNY GROVE . . .



Brisbane Tramway Museum Society

Works Progress

Attention shifted from the Samford Road track extension recently when it was found that the checkrailed sections of the depot curve not set in concrete were being subjected to stress as a result of continuous tramcar operation. The decision to fully complete this job was made and after operations on Sunday 15 February a large workparty was on hand to commence digging under the rails, removing the wooden sleepers and setting up the formwork for concreting. This work was completed during the following week using hired labour for the first time. Several loads of concrete were poured and covered for curing. It was decided to top the new concrete off before operating over it, so drop centre 277 was transferred to the workshops to operate a curtailed service the following Sunday from the end of the depot curve to the McGinn Road terminus.

The topping-off was undertaken the following weekend in appalling conditions brought about by a cyclone near Bundaberg. Several hardy members mixed, barrowed and spread the concrete in rain varying from light to torrential. The inclement weather meant that, as each section was finished, it had to be covered with large sheets of plywood which were in turn covered by an enormous tarpaulin borrowed for the occasion. The final product, it must be said, is a credit to the dedication of the members concerned. All that remains to be done is the edges on some sections outside the rails.

The opportunity was also taken to top the terminus section of the outside track adjacent to McGinn Road to give conductors changing poles and members of the public taking photos an even footing when alighting.

Work on the Samford Road track will recommence soon. The Council of the Society has agreed on a simplified track layout for the terminus and front entrance area. The design allows for eventual duplication whilst avoiding the need for fabrication of numerous turnouts and crossings.

Restoration

Work on drop centre 341 is continuing with Wednesday night, Saturday and Sunday work

parties under the guidance of new Workshop Manager, Peter Burden. At the moment, nearly all the external woodwork has been sanded and undercoating should commence shortly. The headlight reflectors have been rechromed and refitted. John Hudson is assisting with the re-wiring of all doubtful electrical equipment. It is hoped to have this car ready for public operation in the silver, with a blue stripe, colour scheme by July 1981.

The Museum is currently negotiating for the acquisition of an oval windowed Dreadnought. The car is in reasonable condition considering that it has spent 24 years or so in an open paddock. It represents a numerically sizeable class of car missing from the museum collection.

Plans are also under way to obtain a suitable twelve window Dreadnought, thus enabling the three 'standard' types of this car to be exhibited.

Spare parts are being obtained from the body of trolleybus 24 which is to be disposed of by the Royal Brisbane Hospital.

Museum Operations

Despite the recent wet weather, patronage remains good. Drop centre 277 has had new wear plates installed in one bogie and been returned to traffic. After testing it has been decided that combination car 47 will be used to run one special trip each Sunday, with a special fare to be collected to raise money to have the wheels of ten bench 65 re-profiled. The response to the first of these trips on Sunday 15 March was overwhelming, necessitating two trips with full loads.

A quote has been accepted for an awning over the entrance to the bookshop and display area and this will be installed before these notes go to print.

ALBION PARK . . .



Illawarra Light Railway Museum Society

Locomotives

Hudswell Clarke (1706 of 1939) steam loco *Cairns* returned to active duty on Sunday 14 December 1980 after an extensive tender overhaul which entailed reprofiling the wheels, building up and machining the axle journals, the fitting of new bogie bearing brasses and the replacement of rusted plates in the tender tank. At the same time the loco and tender were repainted in the original maroon colour scheme, while the original lettering and lining have been reapplied.

By late January the driving wheels had been removed from *Burra*, the former Corimal Coal Coy loco (Hawthorne Leslie 3574 of 1923) and work had commenced on the overhaul of the main wheel bearings.

Rolling Stock

A four wheel open mine man car, formerly in use at Excelsior Colliery, was received as a donation during November. This vehicle was overhauled and repainted in time for the summer holiday season when it proved most suitable for conducting small parties of non open day visitors around the museum railway behind the Ruston-Hornsby diesel loco (285298).

Queensland rail motor trailer P119 arrived at Albion Park on Monday morning 3 November 1980 and was immediately lowered onto a pair of 2ft gauge bogies obtained some years ago from Ruok Ltd of Alexandra Victoria. This vehicle, constructed at Ipswich Workshops in 1936, was first inspected by an ILRMS party at Redbank Workshops in 1974. The Queensland museum group, ANGRMS, found that P119 was surplus to their needs for their line at Woodford and when they took delivery of similar vehicles, the additional trailer was diverted to Albion Park.

The 30ft length and 7ft width created no problems when the trailer was hauled around the museum railway on clearance trials and by mid February work was well advanced on its restoration. The roof canvas has been stripped and malthoid glued into place; the ceiling has been relined with figured veneer ply; the lighting system overhauled and rewired; all missing glass replaced; sliding window tracks realigned;

internal and external mouldings removed, cut back to bare timber, repainted and refitted; internal timber panels replaced; external panels undercoated.

Trial fittings of spare 2ft gauge axle box and wheel sets into the 3ft 6in gauge diamond framed bogies revealed that little height reduction would be gained, so the Ruok bogies and the trailer underframe have been fitted with new king pin bearings and rubbing plates, lowering the vehicle to an identical roof height level as the other museum passenger rolling stock.

It is planned to have P119 in service by mid winter. In the meantime, $\frac{3}{4}$ in thick plate frames are being constructed so that a pair of long wheelbase bogies will eventually replace the Ruok units under this car.

By mid February the long task of making, glazing and fitting the 14 crown lights and 14 window sashes to the saloon of car 2, (former circa 1918 International bus bodu) was completed. Figured veneered interior bulkhead panels have been made and fitted as longitudinal seat ends in the saloon, but the next stage of restoration will result in end roof canopies, similar to those on the Melbourne cable trailer, being manufactured for this vehicle.

Passenger Operation

During the summer holiday season several additional steaming days were held on public holidays and for picnic bookings. Due to donated TV prime time advertisements on WIN channels 3, 4, 6 and 11, the January open day (11th) resulted in record crowds. A total of 825 tickets were sold for steam train rides while an almost similar number took rides on the two half size electric tramcars operated between the car park and the steam train station.

Lease Extension

The property lease survey has now been lodged with the Shellharbour Council solicitor; this now clears the way for the final expanded lease agreement. This will enable the completion of the main line circle in 45lb rail to be made, resulting in operating procedures which will cater more efficiently for the larger number of visitors who are now coming to the museum and riding on the 2ft gauge railway.

