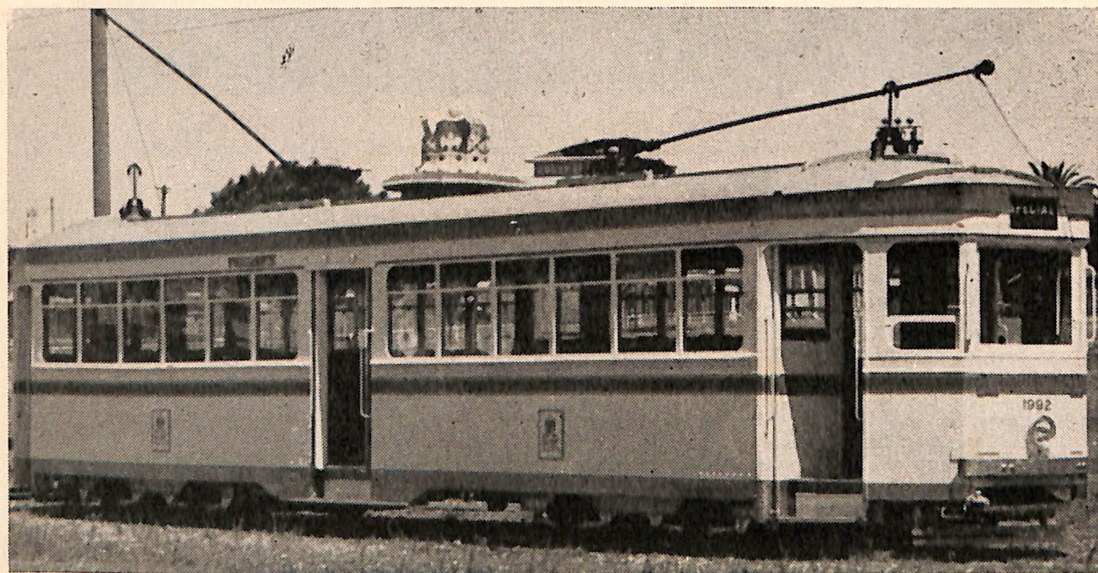


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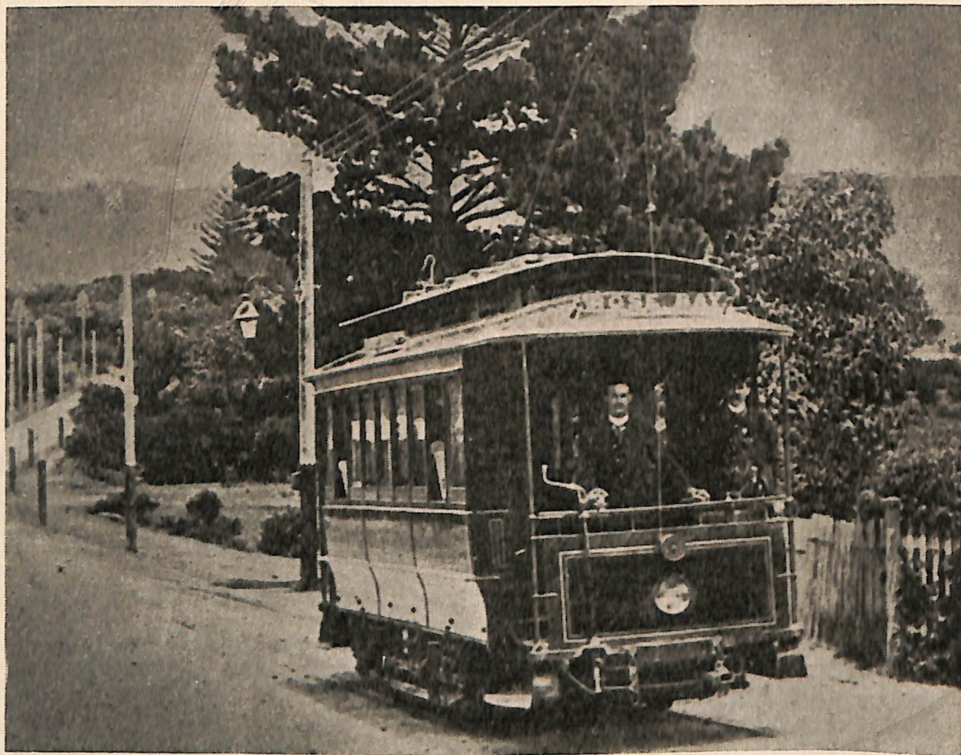
Destination



CIRCULAR QUAY



A Pictorial Review of Sydney Tramcars



9-window C class car at Rose Bay in the early days of electric tramways in Sydney. Note the trolley retriever, later removed (see page 18).

About This Book . . .

which is the fourth of the series to appear, and the first in the new format. We regret the inconvenience to readers wishing to bind the complete set, but technical considerations made the change necessary. It has been possible to use larger illustrations, and this should compensate for any disappointment. Future books will be uniform with this volume.

Why "Circular Quay"

Circular Quay has always been the busiest electric tramway centre in Australia; at one time 27 services terminated there, two others passed through, and there were sundry peak-hour and

special workings. The name (originally Semi-circular Quay) is famous in maritime circles throughout the world, and the locality was the site of the first permanent settlement in Australia in 1788.

Acknowledgements

In accordance with our usual practice, individual photo credits have not been shown. Pictures are by Messrs. J. Alfred, C. R. G. Field, G. F. Johnson, K. S. Kings, E. A. Law, K. McCarthy, K. Magor, N. Reed, J. B. Stranger, W. J. Webster and I. K. Winney; also N.S.W. Railways and the Department of Government Transport. A number of old prints are of unknown origin. The sketch of 28w is by Alan Richardson.

'DESTINATION' SERIES: No. 3

DESTINATION

CIRCULAR QUAY

Edited by
J. RICHARDSON

Associate Editors
N. L. CHINN R. L. YOUNG

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1958

COVER PICTURE

R1 class car No. 1992, decorated for the visit of H.M. Queen Elizabeth II in 1954.



Coupled sets of O and P class cars at the Showground during the 1954 Royal Tour. Over 70,000 children were transported by tram in one of the greatest mass lifts in Australian transport history.

Sydney, N.S.W.

DEPARTMENT OF GOVERNMENT TRANSPORT

Track Gauge: 4 ft. 8½ in. — Colour of Cars: Light green & cream

At its greatest extent, the Sydney tramway network was by far the largest in Australia, and ranked among the large systems of the world. It possessed a fascination unequalled elsewhere, both in the type of operation — horse, steam, cable, electric, and counterweight traction were used (for a short period all were in use at the same time!)—and in the services provided, which ranged from city electric service as heavy as anything in the world to steam interurban lines. Thrown in for good measure were a tramway subway, a tramcar ferry, steam and electric freight services (with both tramway and railway vehicles) and quiet, rural, side-of-the-road lines.

Much of the charm has vanished, for the compact system of today is run on more-or-less conventional lines; nearly one quarter of the system is on reserved track, with such things as interlocked junctions and colour-light signalling, to say nothing of the complicated track layouts serving the principal sports arenas. Sydney is the only Australian city still operating multiple-unit sets in street service, and the only system with a large fleet of service (non-passenger) vehicles.

This large undertaking is not without its whimsical side. Where else, for instance, would steam passenger vehicles be motorised and converted to electric breakdown cars, while electric cars were converted to breakdown trailers for steam service?

Brief History

The first tramway was a horsecar line in Pitt Street, which ran from 1861 to 1865, when objections from various quarters led to its suppression.

In 1879 the first permanent line was opened, and a network of services, all steam-operated, soon developed. Isolated electric lines were opened in 1890, 1893 and 1898, after which the electrification of the main system commenced. Cable cars were operated from 1884 to 1905, and horse cars were used for some years after the latter date.

Besides the main network, there were separate electric systems at North Sydney, Manly, and Ashfield, with an isolated line at Rockdale. Four isolated steam routes also existed. All these services were operated by the State government—originally under the Railways Department, later under variously-named bodies, at present by the Department of Government Transport.

There were two private lines: one, at Rockdale (electric), was taken over by the Department. The other, at Parramatta (steam) remained under private ownership until its closure in 1943.

Trolleybuses

An experimental trolleybus route was opened in the city area in 1934. It had many awkward features and, after a varied and hectic life, was closed in 1949. Meanwhile, a second and larger system was opened in the Kogarah area in 1937 to replace a steam tramway. This service, with its depot at Ramsgate, is still in use.

Colour Schemes

The early electric cars were finished in varnished woodwork with gold lining. Subsequently a chocolate-and-cream colour scheme was adopted which was later replaced by a complicated but rather dreary arrangement of grey-green, olive drop, and light grey, with scarlet and green touches. In 1933, after a brief trial of light green, dark green, and cream, the present colours were adopted. There are light green and cream, divided by a narrow black band, with maroon underframes, bumpers, etc. Most service stock is painted in these colours, but ballast vehicles are usually olive drab all over, and sprinkler cars grey.

Space does not permit the inclusion of steam, cable, and horse trams in this book. These vehicles, together with the Newcastle electric system and the numerous steam tramways in smaller towns and rural centres, will be illustrated and described in a further publication in this series.

SOUTH PACIFIC ELECTRIC RAILWAY

Australia's first traction museum

An open invitation is extended to all enthusiasts, historians and model engineers, to visit the A.E.T.M.'s site in the Royal National Park, N.S.W., and inspect electric cars formerly operated in Sydney.

For particulars, write to:

The Secretary,
Australian Electric Transport Museum,
230 Old Canterbury Road,
Summer Hill, N.S.W.

PASSENGER ROLLING STOCK**R1 Class**

Nos. 1933-2087 (155 cars)

Built: 1935, Clyde Engineering Co. (Nos. 1933-1987); 1950-53, Comeng Ltd. (Nos. 1988-2087).

Type: Bogie saloon, end and centre doors.
Capacity: 56 seats, 54 standing.

Tare: 17.50 tons.

Trucks: Sydney No. 13, except No. 1933-1937 (Sydney No. 12).

Motors: 4 x 40 h.p. (GE247A).

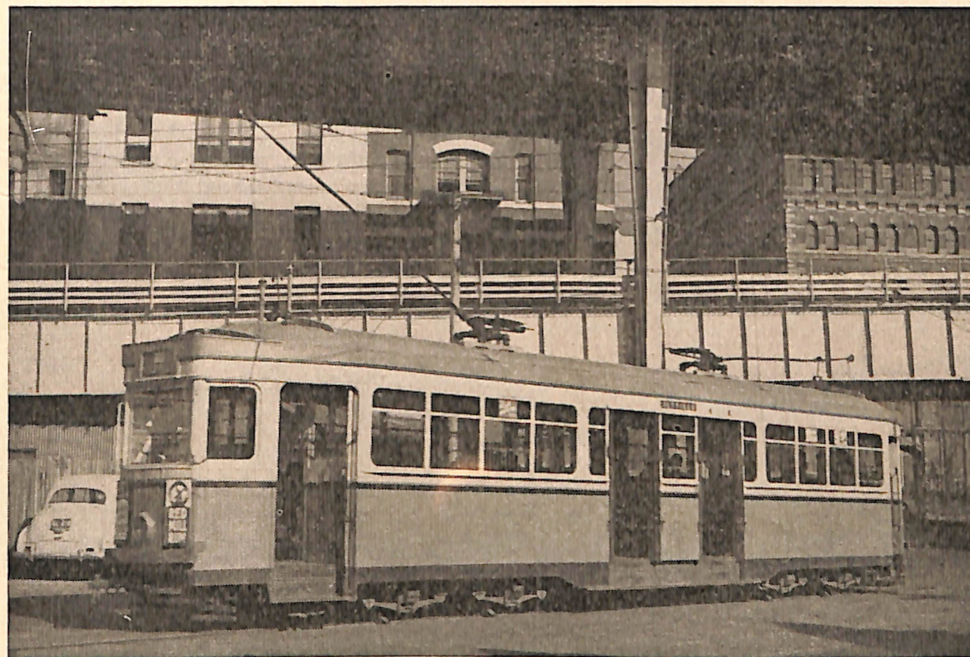
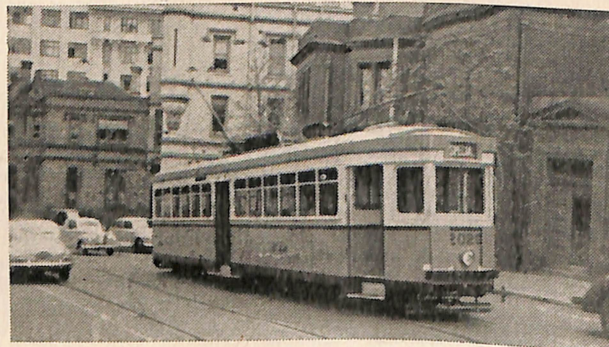
Length: 47ft. 0in.

NOTES: Design was prepared following complaints of inadequate seating in R class, the

last five cars of that class being completed to the new design. Post-war cars are part of an order for 250 cars, the last 150 being cancelled after nearly £150,000 had been spent on them; they embody lined ceilings and other minor improvements. No. 1958 ran for a time with Brisbane-type resilient wheels, in 1950. No. 2029 was fitted with dynamic braking equipment for the steep Neutral Bay route (since removed). No. 2030 received roller bearings in 1956. No. 1974 was equipped with English Electric "Silentbloc" resilient wheels in 1954. Nos. 2018 and 1977 were destroyed by fire in 1953 and 1956, respectively, the former having been in service for only a few hours. Nos. 2000, 2057 snapped after accidents (1958).

This page (top): R1 class (modified R class) No. 1933; (right): R1 class No. 2029 as fitted for dynamic braking (resistors on roof).

Opposite page (top): R class car; (right): PR1 class No. 1582 (see page 8).

**R Class**

Nos. 1738-1932 (195 cars)

Built: 1933-35, Clyde Engineering Co.

Type: Bogie, drop centre saloon.

Capacity: 48 seats, 80 standing.

Tare: 17.65 tons.

Trucks: Sydney No. 12.

Motors: 4 x 40 h.p. (GE247A) (see notes).

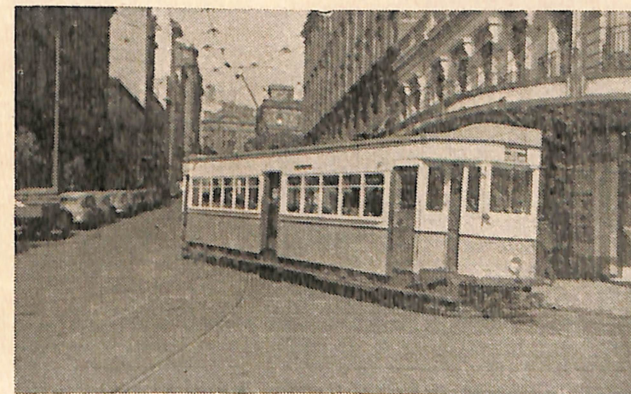
Length: 47ft. 0in.

NOTES: In 1933, to relieve the serious unemployment position, money was made available for government works considered beneficial to the State and which could be put in hand promptly. New trams were needed, but no designs were ready, so a hurried visit was paid to Melbourne to study the (then) new W4 class. This featured a wide body set low over the trucks and, suitably modified for Sydney conditions, it was developed into the R class.

24 cars were completed with 37 h.p. (DK34C) motors, since replaced. Since 1955 the class has been equipped progressively with self-lapping brakes (mostly from equipment ordered for cancelled R1 class cars). 1 car destroyed by fire (1958).

PR1 Class

(details overleaf)



Nos. 1517, 1562, 1573, 1582 (4 cars)

Type: Bogie saloon, with end and centre doors.
Built: 1949 Randwick Workshops (Nos. 1517, 1573), NSW Car Shops (Nos. 1562, 1582).

Capacity: 52 seats, plus standees.

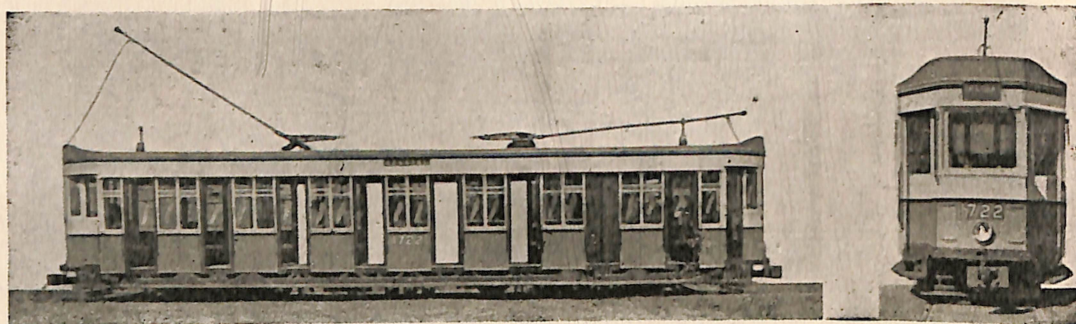
Tare: 18.26 tons.

Trucks: Sydney No. 9.

Motors: 4 x 40 h.p. (GE247A).

Length: 45ft. 5in.

NOTES: Built on underframes of P class cars; drivers' cabins and some other material from original cars. All P class cars were to have been rebuilt to this design, but the cost (£3,000 per car) proved too great. These cars are not popular and see little service.



P Class

Nos. 1480-1516, 1518-1561, 1563-1572, 1574-1581, 1583-1690, 1692-1737 (243 cars).

Built: 1922-29, Randwick Shops (Nos. 1480-1481); Walsh Island Dockyard (No. 1682); Morts Dock & Engineering Co. (Nos. 1708-1737); Meadowbank Mfg. Co. (remainder).
Type: Bogie, closed toastrack.

Capacity: 80 seats, 48 standing.

Tare: 16.60 tons (m.u.), 15.62 tons (d.c.).

Trucks: Sydney No. 9.

Motors: 4 x 40 h.p. (GE247A) (see notes).

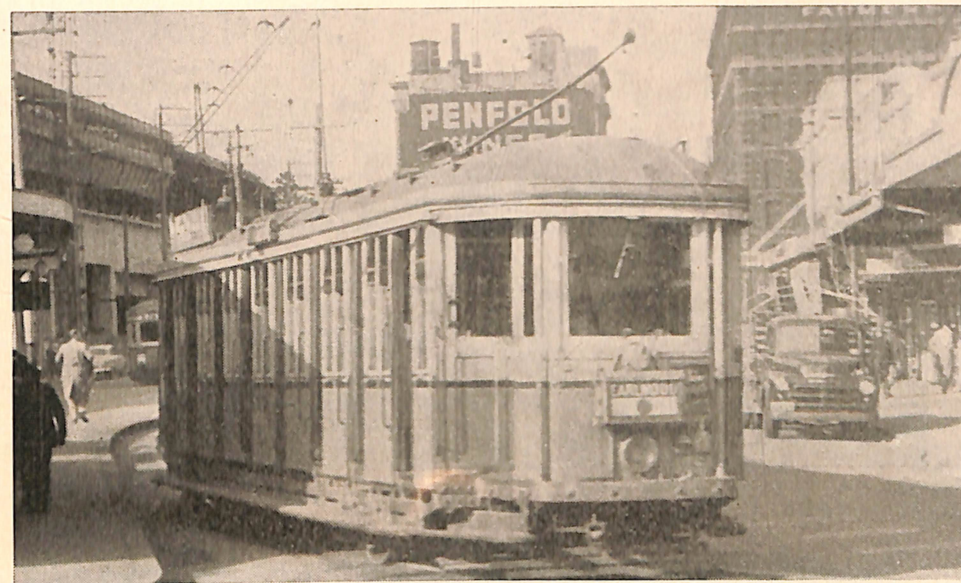
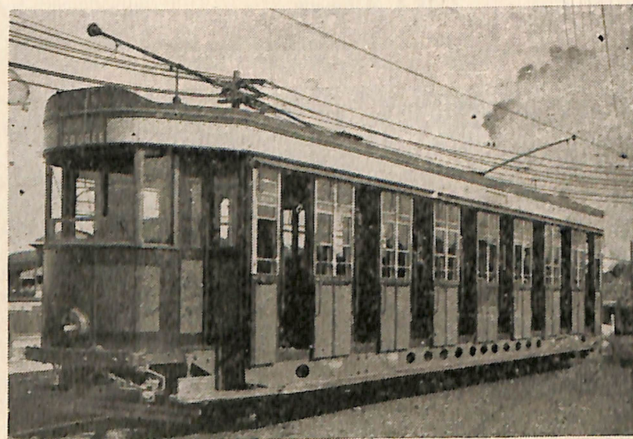
Length: 45ft. 5in.

NOTES: Nos. 1480-1481 fitted with direct control, have non-standard underframe, and cannot be run coupled. All others are multiple-unit cars with Tomlinson automatic couplers.

Five cars of this class converted to PR and PR1 classes, 58 cars built with non-standard motors (WH514—1 car, MV101A—48 cars, MV101AR—1 car, DK105A—1 car, DK34A—7 cars) all remotored (1953-57).

This page (top): P class No. 1722; (left): P class (direct control) No. 1481 in a short-lived colour-scheme of dark and light green and cream.

Opposite page (top): OP class No. 1451; (right): OP class No. 1443 coupled to O class car.



OP Class

Nos. 855, 935, 943, 961, 1007, 1089, 1170, 1241, 1372, 1383, 1443, 1451 (12 cars).

Built: 1918-46.

Type: Bogie closed toastrack.

Capacity: 80 seats, 48 standing.

Tare: 16.20 tons (d.c.), 17.34 tons (m.u.).

Trucks: Sydney No. 4.

Motors: 4 x 40 h.p. (see O class notes).

Length: 45ft. 5in.

NOTES: Converted from O class cars after bad accidents to a design resembling the P class. Nos. 961 and 1443, which were only partially converted, were classified O for many years, and No. 1443 was later re-converted to O class (1953). Nos. 935, 943 fitted for direct control (non-coupled), others multiple control. Nos. 1372, 1383, 1451, converted many years after the others, retained O-type drivers' cabins. Nos. 1383, 1451 in service, others scrapped.

PR Class

No. 1691 (1 car).

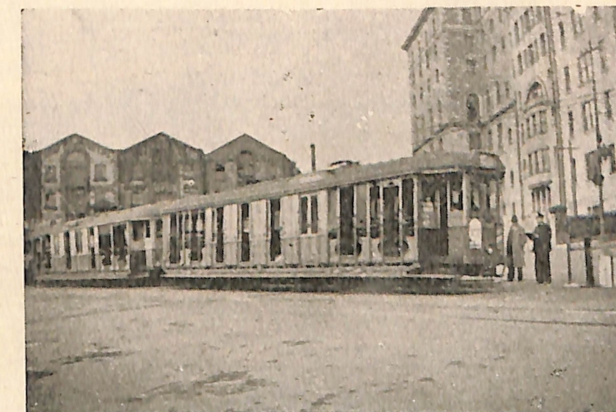
(Appearance as P class)

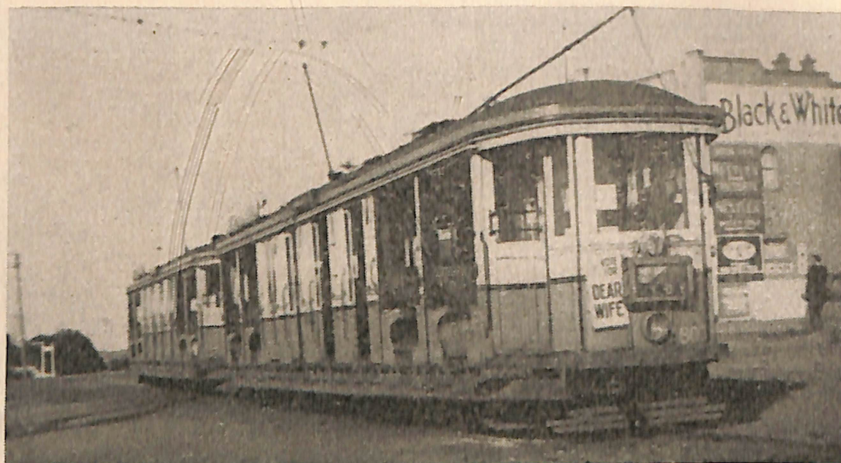
Type: Bogie closed toastrack with centre corridor.

Capacity: 66 seats, plus standees.

(Other details as P class)

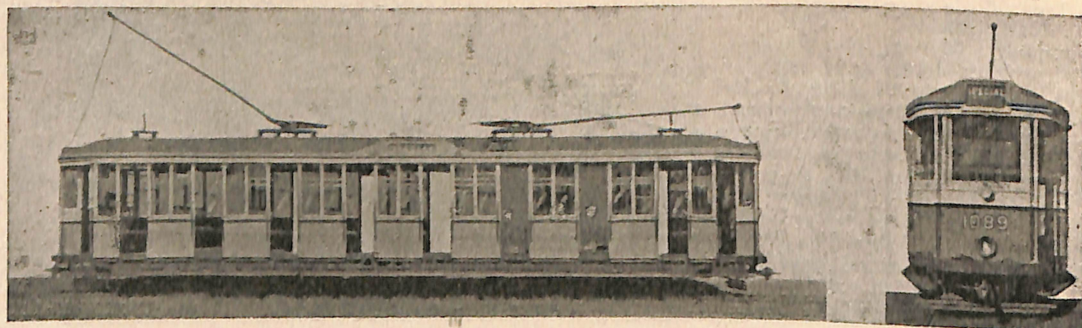
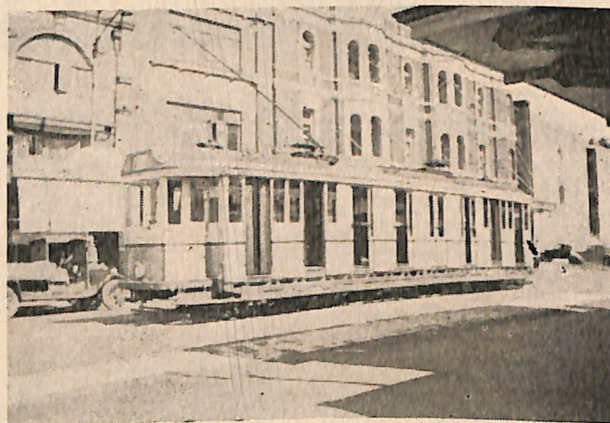
NOTES: Converted from P class (1945) by cutting narrow corridor through seats and bulkheads. Intended as prototype for conversion of other cars to permit greater use of conductresses (who are not permitted to work foot-board cars). Proved a failure owing to structural weaknesses and the cramped nature of the corridor. Scrapped (1954).





This page (top): OP class No. 1089; (right): OP class No. 961; (below): O class Nos. 803 and 885 (coupled set).

Opposite page: "Short N" No. 615.



O Class

Nos. 803-854, 856-934, 936-942, 944-947, 949-960, 962-1006, 1008-1038, 1090-1169, 1171-1240, 1242-1279, 1330-1371, 1373-1382, 1384-1442, 1444-1450, 1452-1479 (614 cars).

Built: 1908 (Nos. 806-818), 1909 (Nos. 803-805, 819-918), 1910 (Nos. 919-947, 949-970), 1911 (Nos. 971-1055), 1912 (Nos. 1056-1198), 1913 (Nos. 1199-1279, 1330-1336), 1914 (Nos. 1337-1479); all Meadowbank Manufacturing Co. except No. 806 (Randwick Shops).

Type: Bogie toastrack, centre compartments closed.

Capacity: 80 seats, 48 standing.

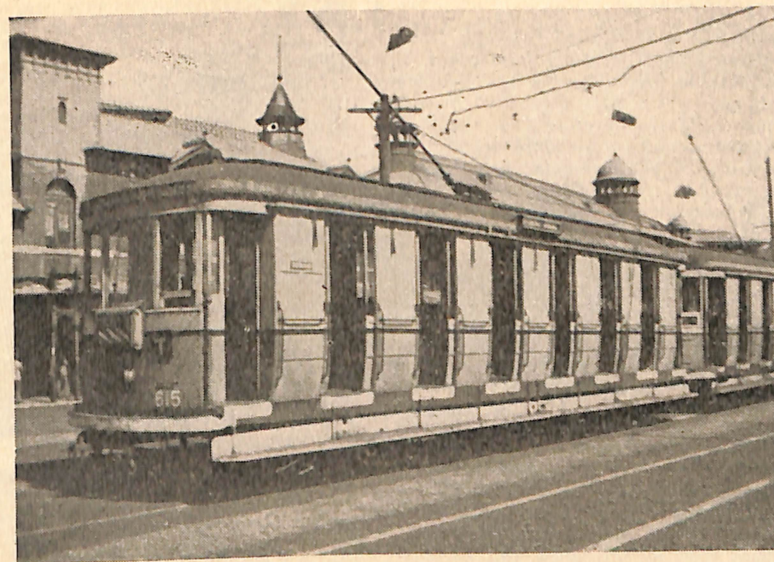
Tare: 17.86 tons (m.u.), 16.49 tons (d.c.).

Trucks: Sydney No. 2 (Nos. 803-897), others Sydney No. 4.

Motors: 4 x 40 h.p. (GE238—Nos. 1380-1479, others GE247D) (see notes).

Length: 45ft. 5in.

NOTES: Nos. 806, 898-947 had direct control and could not be run coupled. Remainder have multiple control. With 33in. wheels they are the fastest cars in Sydney. 220 cars remotored with GE247D motors since 1947. 496 cars originally fitted with 4 x 37 h.p. motors (DK10A—277 cars, DK10A3—32 cars, GE81—187 cars). For a time 20 cars ran with 4 x 43.5 h.p. motors (GE81R) and 1 car with DK10B motors. Cars at North Sydney always had split-frame motors prior to 1939 (to avoid need for return to Randwick for inspection). Nos. 1277-1279 were built for experimental 600/1200-volt operation with a view to proposed interurban operation. Twelve of this class converted to OP class. No. 937 converted to motor flat car (1953). Nos. 822, 1000, 1030, 1229 converted to breakdown cars (1955-56). All direct control cars written off prior to 1953. Over 400 multiple-unit cars scrapped prior to 1958. Many of remainder stored.



N Class

Nos. 295, 398-412, 613-647, 684-703, 705-728 (95 cars).

Built: 1901-1906.

Type: Maximum-traction, bogie, closed toastrack.

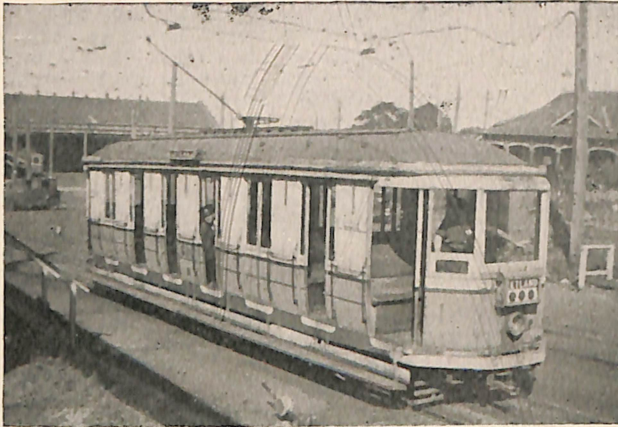
Capacity: 70 seats, 42 standing.

Tare: 14.28 tons.

Trucks: Brill 22E.

Motors: 2 x 60 h.p. (GE90 or GE275); 2 x 50 h.p. (GE203) on some.

Length: (as built) 37ft. 6in. (as modified) 39ft. 4in.



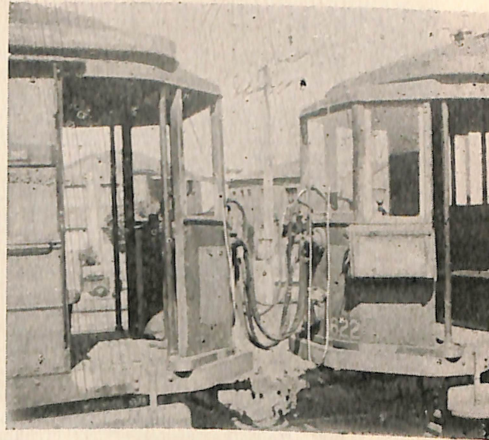
This page (left): Standard N class car; (below): coupling arrangements, N class Nos. 619, 622.

Opposite page (top): M class No. 737; (centre): LP class No. 274 (low sides).

Page 14 (top): LP class No. 387 (high sides); (centre): L class No. 345.

Page 15 (top): K class No. 1296 (see page 37 for another view of this car); (right): J class No. 648.

NOTES: Originally had open end platforms which were extended and enclosed in 1909. No. 295 was converted experimentally from the F class and had double footboards for the two centre compartments which were connected by a narrow centre aisle and reserved "for the ladies" (subsequently rebuilt to standard design). This car and Nos. 398-412 distinguished by massive grab rails. Nos. 619, 622 fitted for direct-control coupled operation (1924). No. 704 converted to LP class (1923). Nos. 401, 407, 410, 620, 623, 642 used as steam trailers (1915-20); No. 642 subsequently ran as electric trailer (to 1924). Nos. 613-617 shortened and drivers' cabins enclosed for all-night service (1920-21)—known as "Short N's"—with seating capacity reduced to 60. N's hauled steam trailers and railway freight cars on Rockdale line. No. 728 presented to A.E.T.M., remainder scrapped.



(Continued from page 35)

Tare: 6.30 tons.
Motors: 1 x 84 h.p. EE405-7C.
Length: 26ft. 0in.

NOTES: No. 3 was imported complete and was Australia's first double-deck trolleybus built as such. All fitted with regenerative braking and built for Wylde Street route. Nos. 4-5 later transferred to Ramsgate. All now scrapped.

Nos. 1-2 (2 vehicles).

Built: 1934, Park Royal (No. 1); H. K. McKenzie (No. 2).
Type: Single-deck, 3-axle.
Chassis: A.E.C.
Capacity: 34 seats, plus standees.
Tare: 7.10 tons.
Motors: 1 x 90 h.p. BTH201-A2 (No. 1); 1 x 84 h.p. EE401-1B (No. 2).
Length: 30ft. 0in.

NOTES: No. 1 imported complete. Both built for Wylde Street service, later transferred to Ramsgate. Scrapped.

M Class

Nos. 737-738 (2 cars).

Built: 1906-07, Randwick Workshops.

Type: Maximum-traction, bogie open toastrack.

Capacity: 70 seats, 42 standing.

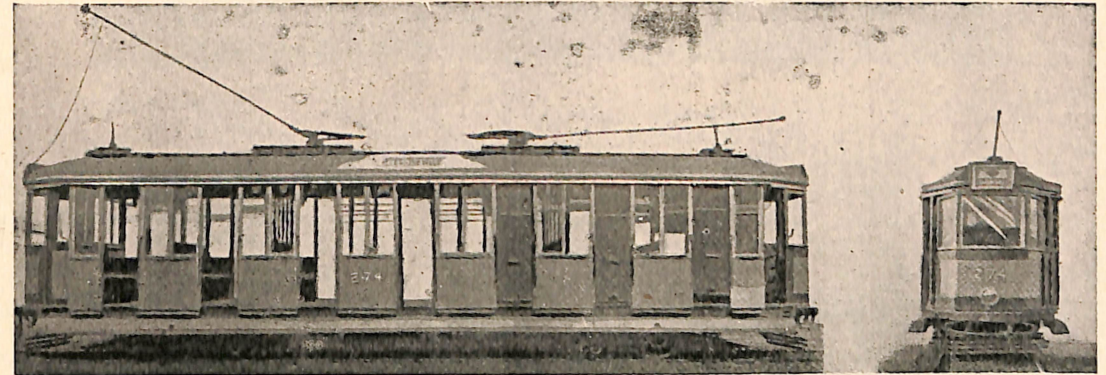
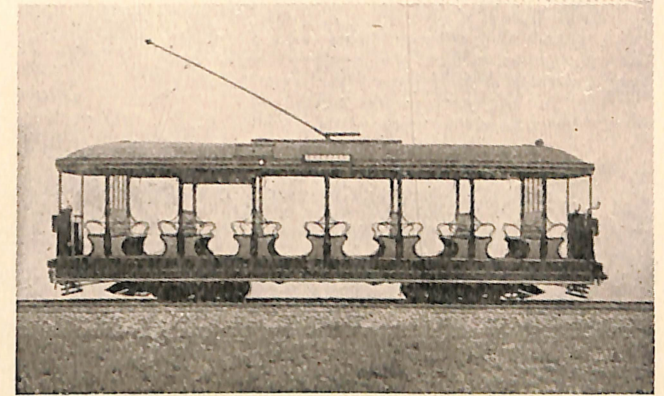
Tare: 13.06 tons.

Trucks: Brill 22E.

Motors: 2 x 65 h.p.

Length: 35ft. approx. (as built); 37ft. 3in. (as modified).

NOTES: Built as tourist cars. End platforms lengthened and vestibuled as N class. Scrapped (1940).



LP Class

Nos. 122, 140-288, 294, 296-395, 704 (251 cars).

Built: 1918-30 (see notes).

Type: Bogie closed toastrack.

Capacity: 70 seats, 42 standing.

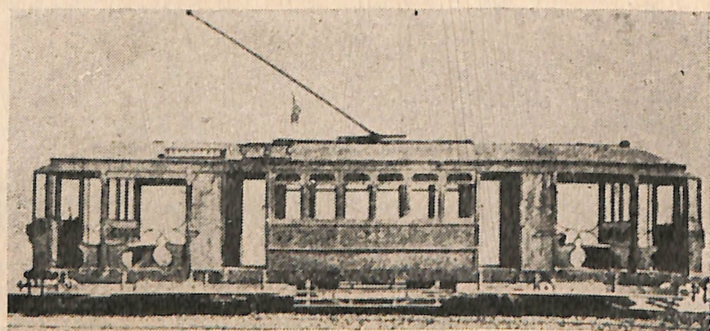
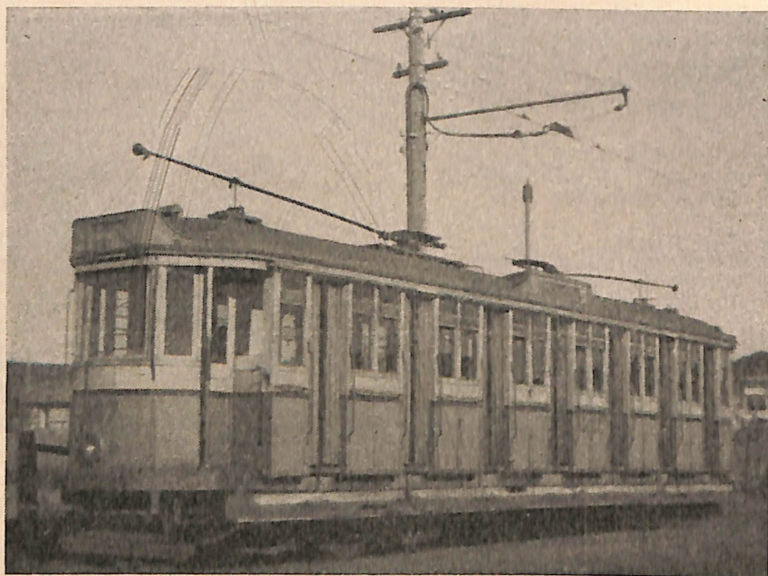
Tare: 14.95 tons.

Trucks: Brill 22E (maximum traction).

Motors: 2 x 48 h.p. (GE67), 2 x 50 h.p. (GE203), 2 x 55 h.p. (DK83, DK83A), 2 x 60 h.p. (GE90, GE275).

Length: 40ft. 10in.

NOTES: Fitted for direct control (coupled) operation, coupling facilities being provided at No. 2 ends only. Converted from L class. No. 704 converted from N class (apparently to compensate for No. 295, originally rebuilt as prototype N). Two types existed, with low sides and roller blinds, and high sides with concertina doors, respectively. From 1923 onwards, a total of 97 cars was transferred to Newcastle where they provided all passenger service, and some had air hose connections at both ends to permit trailer operation. No. 310 fitted with metal roof and concrete floor. In later years, LP's in Sydney always ran coupled. No. 154 presented to A.E.T.M. Remainder scrapped (1949-53).



L Class

Nos. 122, 140-288, 294, 296-392, 394-395 (250 cars).

Built: 1909-1913 (see notes).

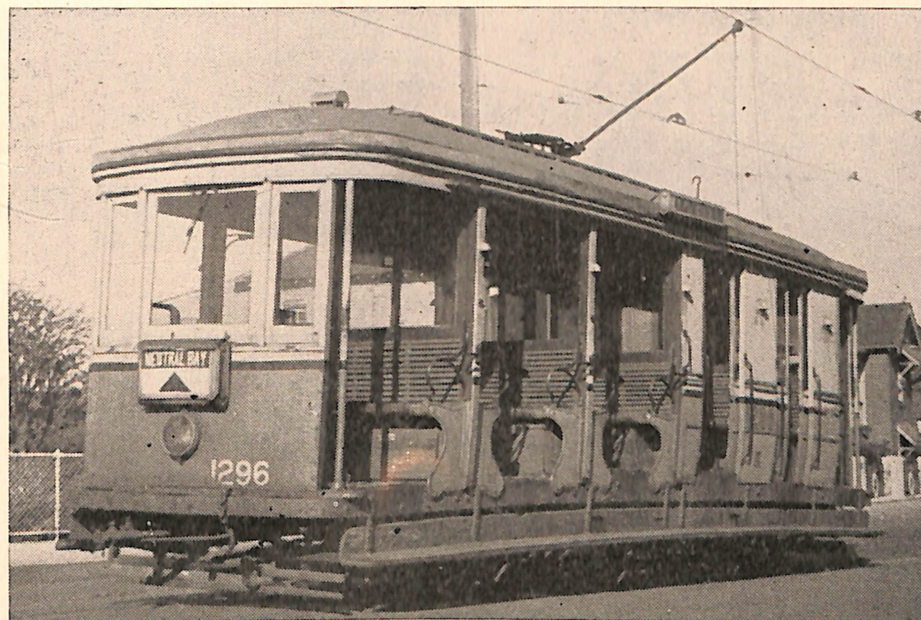
Capacity: 55 seats plus standees.

Tare: 13.07 tons.

Length: 40ft. 9½in.

(Other details as F class.)

NOTES: The entire F class except Nos. 295 and 393 were converted to this design, using fixed cross benches in the open sections, to obtain greater seating capacity. It has been claimed that Nos. 328-392 were built as L's, but photographs show several of these cars unmistakably as F's. All rebuilt as LP class (1918-30).



K Class

Nos. 746-802, 1280-1329 (107 cars).

Built: 1908/1913.

Type: Single-truck, semi-open toastrack.

Capacity: 50 seats, 30 standing.

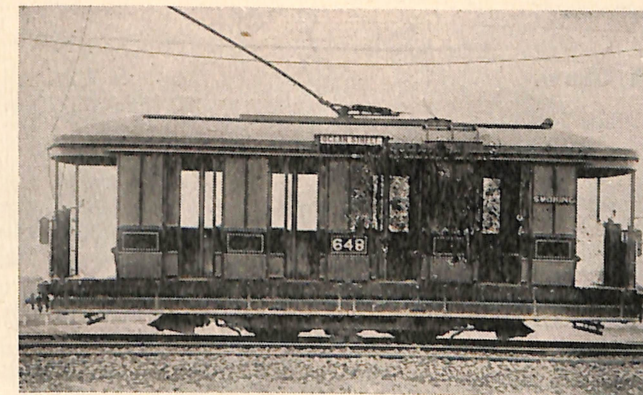
Tare: 10.68 tons.

Trucks: Sydney No. 1.

Motors: 2 x 48 h.p. (GE67), Nos. 746-802; 2 x 50 h.p. (GE203), remainder.

Length: 29ft. 2in.

NOTES: No. 1 ends had drivers' protection; No. 2 ends open on most. Nos. 1295-1296, which had both ends closed, were fitted with track brakes (1917) for Neutral Bay line. No. 792 used for some years as freight car. Except for the three cars mentioned above, the K's always ran as coupled sets from 1935 onwards. Nos. 801-802 fitted experimentally with air hooters. Nos. 763, 797 converted to scrubbers (1952-53). No. 1296 presented to A.E.T.M. Remainder scrapped (1939-50).



J Class

Nos. 648-682, 741-745, (2nd) 23, 25, 33, 39, 98, 101, 110 (47 cars).

Type: Single-truck, closed toastrack.

(Continued overleaf)

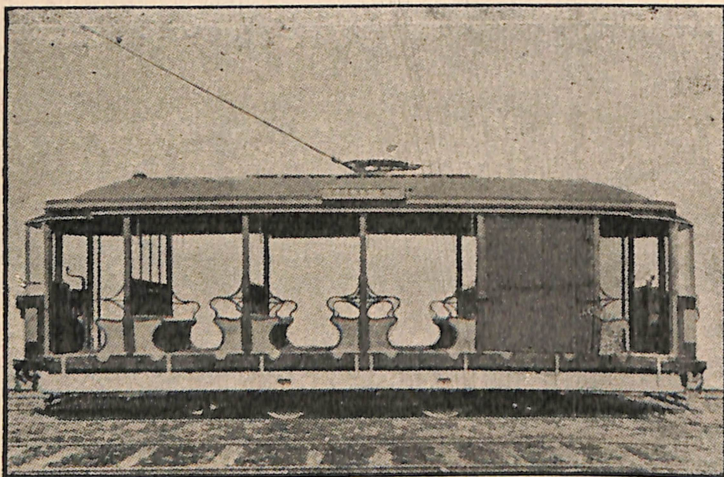
(From previous page)

Built: 1904 (Nos. 648-682); 1907 (Nos. 741-745, 98, 101, 110); 1908 (Nos. 23, 25, 38, 39); all Meadowbank Mfg. Co.

Capacity: 50 seats, 30 standing.

Tare: 11.4 tons.

Trucks: Sydney No. 1, Peckham (6ft. 6in. and 7ft. 6in.).



H Class

Nos. 739-740 (2 cars).

Type: Single-truck, open toastrack.

Built: 1907 Randwick Workshops.

Capacity: 50 seats, 30 standing.

Tare: 11.64 tons.

Trucks: Sydney No. 1.

Motors: 2 x 48 h.p. GE67.

Length: 28ft. 0in.

NOTES: Originally built for tourist traffic. Had track brakes temporarily (1910). Written off 1936. Underframe of No. 739 used in construction of double-deck steam trailer for 150th Anniversary Celebrations (1938).

(For details of illustrations see page 18)

Motors: 2 x 48 h.p. GE67, except low-number cars of which No. 98 had 2 x 60 h.p. GE90, others 2 x 50 h.p. GE203.

Length: 29ft. 2in.

NOTES: Lower-numbered cars built to replace C and D class cars sold to Victorian Railways (V.R. subsequently built new cars similar to J class). Platforms enclosed 1909. Some cars had Newell's track brakes. Nos. 23, 25 ran coupled. Written off 1933-1936.

G Class

Nos. 124-139 (16 cars).

Built: 1899, St. Louis Car Co. (Nos. 124-131); 1900, J. G. Brill & Co. (Nos. 132-139).

Type: Maximum-traction, bogie, single-end, open combination, clerestory roof.

Capacity: 49 seats, plus standees.

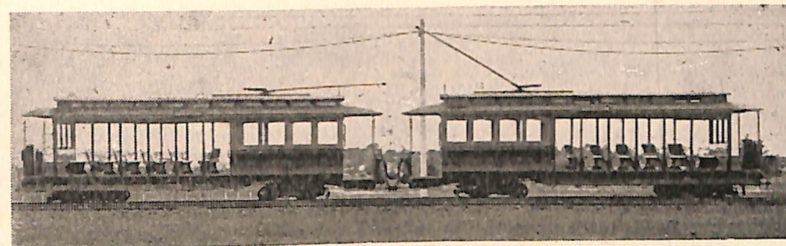
Tare: 11.65 tons (Brill); 12.56 tons (St. Louis).

Trucks: Brill 22E.

Motors: 2 x 42 h.p. (GE1000). Later remotored, 2 x 48 h.p. (GE67).

Length: 38ft. 4in. (Brill); 38ft. 6 $\frac{3}{4}$ in. (St. Louis).

NOTES: Permanently coupled in pairs. Brill cars had lower rear platforms; St. Louis had straight sills and continuous footboards. Scrapped, 1927.



F Class

Nos. 122, 140-288, 294, 296-395 (251 cars).

Built: 1899-1902.

Type: Bogie California combination.

Capacity: 44 seats, plus standees.

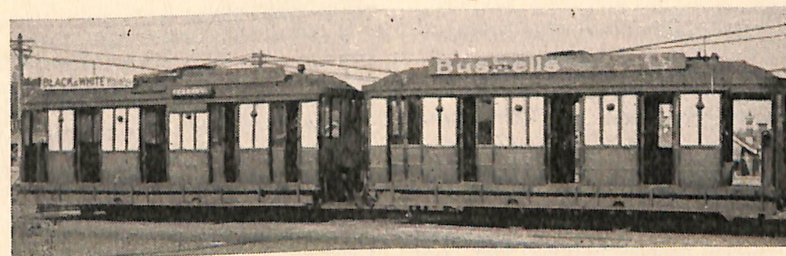
Tare: 12.26 tons.

Trucks: Brill 22E.

Motors: 2 x 60 h.p. (GE90).

Length: 38ft. 6 $\frac{1}{2}$ in.

NOTES: Fitted for direct-control, coupled-car operation. Reversible longitudinal seats in open sections; doorway to end platforms. No. 295 of this class converted experimentally as prototype of N class. No. 393 used as Drivers' Instruction car and re-numbered with Service Stock (1927). Remainder converted to L class (1909-13), later to LP. Reported that two cars were converted direct to LP.



E Class

Nos. 396-397, 413-612 (202 cars).

Built: 1901, Randwick Shops (Nos. 396-397); 1902-03, Clyde Engineering Co. (remainder).

Type: Single-truck, single-end, closed toastrack, permanently coupled in pairs.

Steam trailer cars Nos. 3, 10, 12, 15-16, 21, 29. Capacity: 45 seats, 30 standing.

Tare: 10.03 tons.

Trucks: Sydney No. 1 (6ft. 6in.), Maguire "Columbia", Maguire A1 Suspension, Peckham.

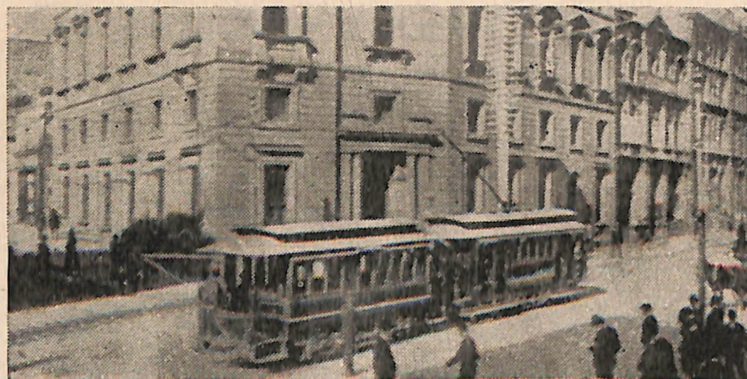
Motors: 2 x 48 h.p. (DK30B), Nos. 555-556; others had 2 x 48 h.p. (GE67) or 2 x 50 h.p. (GE203).

(Continued overleaf)

(Continued from previous page)

Length: 27ft. 5½in.

NOTES: Although regarded as two cars for traffic purposes, the E sets were wired electrically as a single 4-motor car. Towed BT trailers until 1919. Track brakes fitted to Nos. 477-478, 487-490, 493-506, 529-532 (1911). Nos. 587-588 painted blue by arrangement with a retail firm (1925). Nos. 431, 456 coupled following accident (1920). Nos. 529-530 presented to A.E.T.M. Remainder scrapped 1921 (Nos. 432, 455), 1932 (Nos. 537-538), 1934-1955.

**D Class**

Nos. 98-121, 123 (25 cars).

Built: 1899.
Type: Single-truck California combination.
Capacity: 34 seats plus standees.
Tare: 9.51 tons.
Trucks: Sydney No. 1 or Peckham.
Motors: 2 x 36 h.p. (later had 2 x 48 h.p. GE67).
Length: 29ft. 11 in.

NOTES: No. 102 fitted Newell's magnetic brake (1904). No. 117 fitted for regenerative braking as experiment (1906). Nos. 99, 109, 116, 119 had track brakes for Neutral Bay line. Nos. 99, 102, 116 ran singly; others were coupled to C class cars. Nos. 98, 101, 110 sold to Victorian Railways (1907). Nos. 99, 102-103, 105-106, 116-117 converted to scrubber cars (1929-30). No. 123 converted to breakdown car, later scrubber. Three cars sold to Electrolytic Refining Co., Port Kembla, and converted to locomotives. Remainder scrapped (1923-25).

Page 16: H class No. 740.

Page 17 (top): G class Nos. 138-139 (Brill); (centre): F class (coupled set); (bottom): E class Nos. 396-397.

This page: D class No. 103 with C class No. 96 (other illustrations of D class cars will be found on pages 32-33).

Page 19: C class Nos. 23 and 38.

C Class

Nos. 4-97, 289-291 (97 cars).

Built: 1896, Bignal & Morrison (Nos. 6-8), Hudson Bros. (No. 290); 1897, Bignal & Morrison (Nos. 4-5); 1898, Hudson Bros. (Nos. 9-10, 17, 29, 33, 59, 289, 291); 1899, Hudson Bros. (Nos. 11-16, 19, 22-28, 30-32, 34-51, 53-58, 60-66, 76-77), Clyde Engineering Co. (Nos. 78-91, 94-97); 1900, Hudson Bros. (Nos. 18, 20-21, 52, 67-75), Clyde Engineering Co. (Nos. 92-93).

Type: Single-truck saloon.

Capacity: 20 seats (Nos. 14-16), 22 seats (Nos. 4-5, 9-13), 26 seats (remainder), plus standees.
Tare: 8.45 tons (Nos. 4-5, 9-16), 8.60 tons (Nos. 6-8, 289-291); 8.41 tons (remainder).

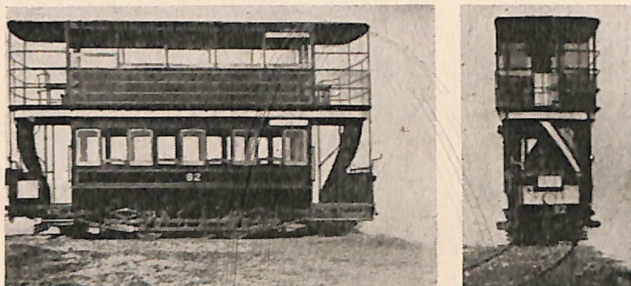
Trucks: Sydney No. 1 (Brill 21E), or Peckham.
Motors: 2 x 48 h.p. (GE67); originally had 2 x 36 h.p.

Length (over headstocks): 23 ft. (Nos. 4-5, 9-16), 26ft. (Nos. 6-8, 289-291), 25ft. (remainder).



NOTES: This class has the most diverse and remarkable history of any Australian tramcar. In appearance they were not uniform, Nos. 4-5, 9-16 having six windows, Nos. 6-8, 289-291 seven windows, and the remainder nine windows. Nos. 18, 51-77, 83, 91-97, and 289-291 were built as trailers (known as T class) and, though later motorised, had no control equipment; they were always run in 2-car sets with standard cars on routes with balloon loops or turning triangles; three T's ran coupled with D's, others with C's. Nos. 33/92 and 89/93 ran as 3-car sets, hauling ex-cable trailers. Sixteen standard C's ran coupled (nine permanently) with D class cars; the others could be run as single cars if required. Nos. 20-21 had track brakes for the Neutral Bay line and ran coupled with D's similarly fitted. Nos. 33, 82 were converted to double-deckers (1907) and ran coupled on at least one occasion; top-decks removed (1908). The C class originally had trolley retrievers and open platforms; the latter were enclosed (No. 1 ends only) from 1909.

The class was last used in passenger service in 1924-25, after which all cars not mentioned elsewhere in these notes were scrapped. Nos. 7, 11-13, 20, 22, 29, 34, 85-86, 88-89, 93, 290-291 converted to haulage or breakdown cars (1909-24); Nos. 14-16 sold to E.S.C., Ballarat (1905); Nos. 23, 25, 38-39 sold to Victorian Railways (1907); No. 27 sold to North Coast Steam Navigation Co. for use as steam trailer at Byron Bay (1924); Nos. 28, 58 used as mealrooms, Dowling Street Depot, then scrapped (1922); Nos. 31, 44 converted to Ambulance cars (1915); Nos. 33, 92 used as works shunters (unaltered) from 1924; Nos. 52, 56 sold to Abermain Colliery for use as steam trailers (1923); Nos. 61, 68, 94 used at Randwick Shops as Tester's Office, Conciliation Room, and Tool Shed, respectively; No. 82 converted to welding car (1916); No. 96 converted to breakdown trailer for steam service (1915); No. 290 presented to A.E.T.M. and will be restored to original condition.



This page (left): Double-deck C class No. 82; (below): Experimental car No. 1.

Opposite page (top): BT class, towed by E's (second track from right); (bottom): Nos. 31 and 44 as Ambulance cars (see page 22).



Experimental Cars

Nos. 1-3 (3 cars).
 Built: 1890, Stephenson, U.S.A.
 Type: Single-truck saloon.
 Capacity: 22 seats plus standees.
 Tare: 5 tons.
 Trucks: Bemis.
 Motors: 2 x 10 h.p. (see notes).
 Length: 26ft. 0in.

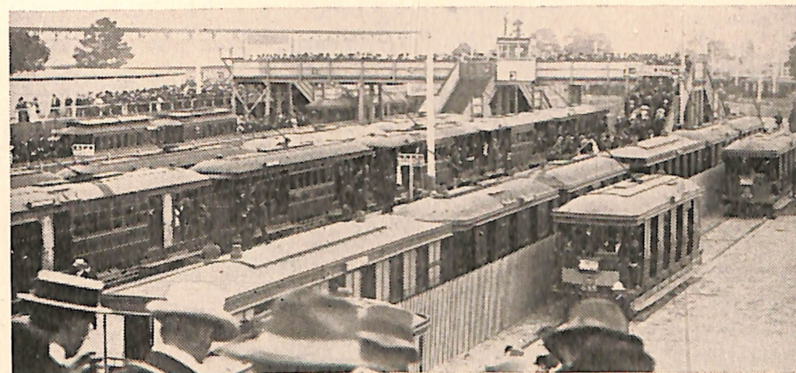
NOTES: Imported for experimental electrification of the Waverley Extension line. In 1893 opened first permanent electric line (Military Road,

Mosman), on which they later hauled ex-cable trailers. Remotored with 2 x 30 h.p. (BTH) (No. 1), or 2 x 27 h.p. (GE800) (Nos. 2-3). Sold to E.S.C., Ballarat (1905). Had side-mounted trolley poles.

T Class

Nos. 18, 51-77, 83, 91-97, 289-291 (39 cars).

The above cars, identical in all respects with the C class, were originally built as trailers. They were subsequently motorised and reclassified as "C".



BT Class

(65 cars—not numbered with electric cars)

Steam trailer cars Nos. 3, 10, 12, 15-16, 21, 29, 36, 40, 42-43, 48, 51-52, 55-57, 65-66, 69, 71, 73, 77, 85-86, 88, 90-91, 93, 97-98, 101-103, 108, 115-116, 118, 125, 129-133, 135, 137, 141, 143, 146, 148-149, 152, 154-156, 167-169, 173-174, 179, 183-184, 188, 191 were adapted for use as electric trailers on the main system (1903), the Manly system (1911), and Newcastle (1926). They retained their numbers on the steam roster, and in many cases were reconverted to steam trailers; in fact, several of the cars at Newcastle enjoyed their second conversion for electric service. In Sydney, the steam trailers were hauled by E, N and O class cars. All scrapped.

Trailers (ex-Cable)

Nos. 683, 729-736 (9 cars).
 Built: 1894.
 Type: Single-truck saloon.

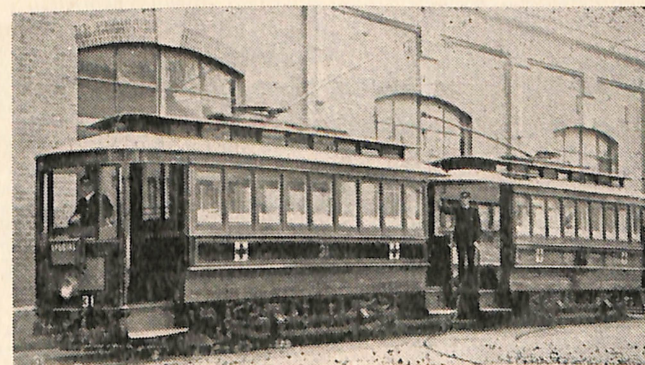
Capacity: 16 seats (Nos. 729-732), 20 seats (remainder).
 Tare: 2.41 tons (No. 683), 2.46 tons (remainder).
 Length: 23ft. 0½in. (No. 683), 18ft. 6in. (remainder).

NOTES: Built for the Ocean Street cable line and converted to electric trailers after that line closed (1905). No. 731 converted to breakdown trailer for steam service (1907). Remainder scrapped (1911-20).

Trailers (ex-Horse)

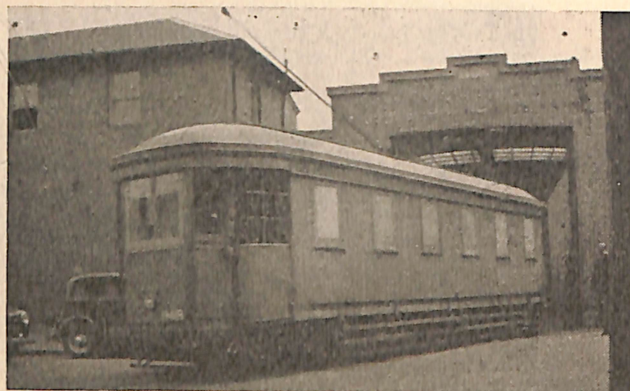
Nos. 292-293 (2 cars).
 Built: 1894.
 Type: Single-truck saloon.
 Capacity: 16 seats.

NOTES: Former horse cars Nos. 199-200 (numbered with steam cars), adapted for electric trailer service (1901). Again used as horse cars (1903-07). Scrapped (1913).



This page (right): Prison car No. 948 (at rear of Darlinghurst Court).

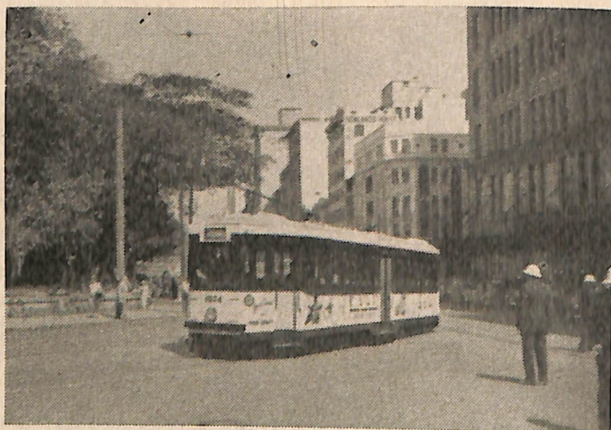
Opposite page (top): Ballast Motor No. 91u; (bottom): No. 26u (see page 24).



Ambulance Cars

Nos. 31, 44 (2 cars).

NOTES: Two C class cars as above were converted in 1915 for use as ambulances to convey wounded military personnel from Central Station to Randwick Military Hospital, where a siding was provided. The bulkheads at the coupled ends of the cars were removed to facilitate the handling of stretcher cases. Scrapped (1925).

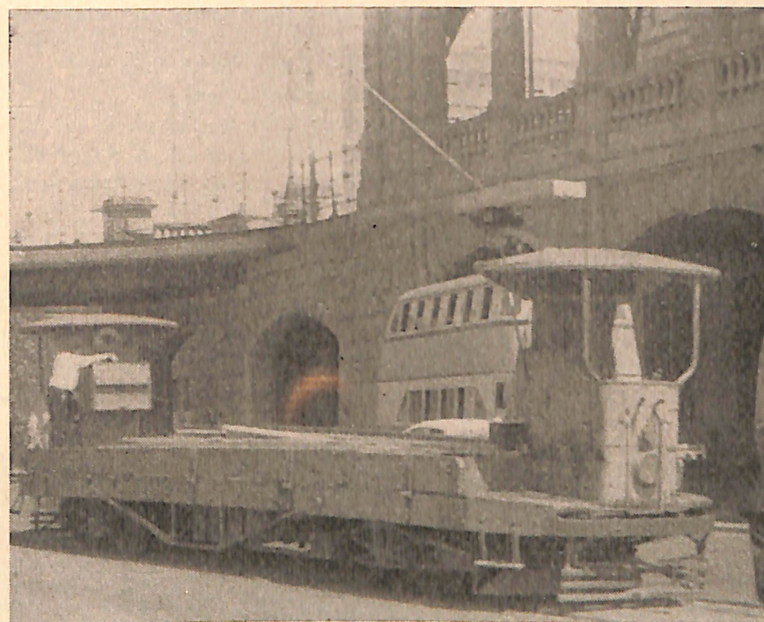


R1 class car used to stimulate recruiting for the Royal Australian Air Force. A light blue and dark blue colour scheme was used, together with R.A.A.F. emblems.

Prison Car

No. 948 (1 car).
 Built: 1909, Randwick Shops.
 Type: Box motor fitted with barred lock-up cells.
 Capacity: 36 "passengers" (in 6 cells).
 Tare: 14.82 tons.
 Trucks: Brill 22E.
 Motors: 2 x 60 h.p. (GE90).
 Length: 38ft. 4in.
 NOTES: Used to convey prisoners between Long Bay Gaol and Darlinghurst Court House, sidings being laid in to both establishments. Presented to A.E.T.M.

SERVICE STOCK



Ballast Motors

U Class: Nos. 42u, 87u-98u (13 cars).
 Built: 1909 (No. 42), 1912-13 (remainder).
 Type: Bogie, drop-side, motor gondola.
 Capacity: 10 tons.
 Tare: 15.41 tons (No. 42), 18 tons (remainder).
 Trucks: Sydney No. 6.
 Motors: 4 x 48 h.p. (GE67) (No. 42), 4 x 50 h.p. (DK11E) (remainder).
 Length: 37ft. 5½in. (No. 42), 41ft. 6in. (remainder).
 NOTES: Another car of this class (No. 99u) converted to overhead line car. No. 87u fitted with railway-contour wheels (1915) for reconstruction of the Rockdale line (then newly-acquired) which carried railway freight cars. No. 90u fitted with improved cabin and coupled to 93u for conveyance of 60ft. welded rails (1919), later uncoupled (1921). No. 91u converted to welding car (1916), later rebuilt as ballast motor, No. 42u sold to N.S.W. Railways and converted to overhead line car (battery-powered) for underground railways (1926).

No. 93u fitted with floodlighting and used to carry "actuality" advertising ranging from automobiles to the laundry shown in the illustration. Three cars were used in regular coal



traffic to Randwick Shops; others used for general freight service, as well as departmental freight and ballast traffic. Some still in use, remainder scrapped.

U Class: Nos. 26u (1 car).

Built: 1905, Randwick Shops.

Type: Maximum-traction, bogie, drop-side gondola.

Capacity: 10 tons.

Tare: 13 tons.

Trucks: Maguire maximum traction.

Motors: 2 x 48 h.p. (GE67).

Length: 37ft. 3 in.

NOTES: Scrapped (1939).

U Class (ex-Crane Cars): Nos. 46u-51u (6 cars).

Type: Bogie crane cars with drop-side gondola body.

Built: 1909 Ritchie Bros.

Capacity: 10 tons.

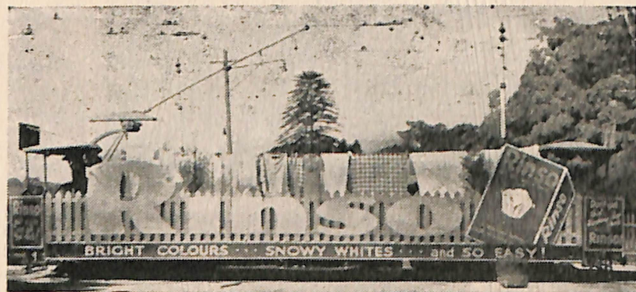
Tare: 18.25 tons.

Trucks: Sydney No. 3, 3A.

Motors: 4 x 60 h.p. GE275F (No. 48); others 4 x 48 h.p. GE67.

Length: 41ft. 6in.

NOTES: Cranes removed 1922 and cars operated as ballast motors. No. 50u used as freight car 1915-1916. Some still in service, remainder scrapped 1950 onwards.



Eames vacuum brake for steam service in addition to air brake for electric service. The older cars originally had vacuum brake only. Many were altered from time to time to meet traffic requirements, the classification being changed accordingly. Used for public freight, departmental freight, and permanent way purposes. Nos. 106-111 were built for the Public Works Department (at that time the construction authority for tramways) and taken over

Ballast Trailers

V and SV Classes: Nos. 1-22, 64-86, 106-111 (51 cars).

Built: 1882 (Nos. 1-4), 1884 (Nos. 5-13), 1885 (Nos. 14-16), 1901-02 (Nos. 17-22), 1911 (Nos. 64-65), 1912 (Nos. 66-86), 1913 (Nos. 106-111).

Type: Bogie, drop-side gondola.

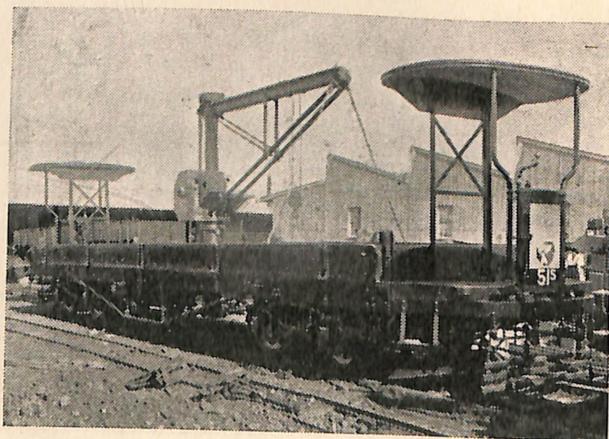
Capacity: 10 tons.

Tare: 5.17 tons (Nos. 1-22), 5.20 tons (remainder).

Trucks: Sydney No. 5.

Length: 30ft. 10½in.

NOTES: Identical, except for braking systems, the SV class having

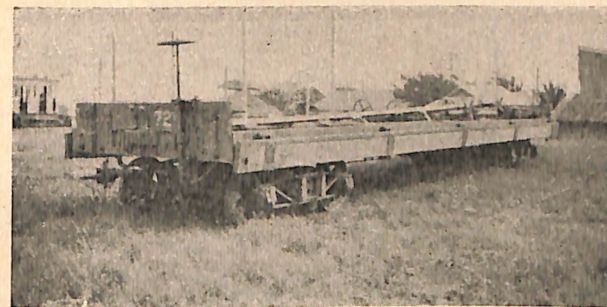
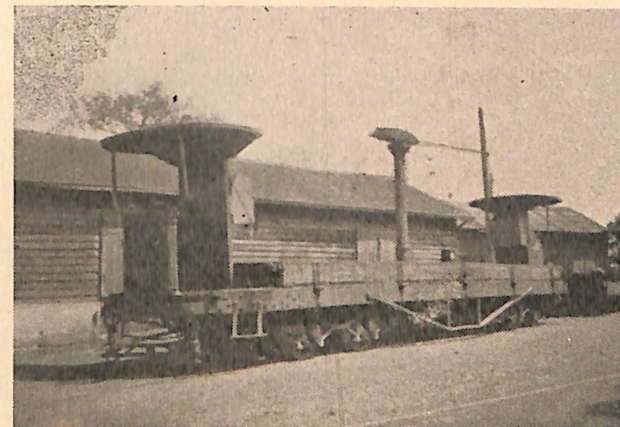


by the tramways in 1917-18. Nos. 1, 4, 13, 15, 19, 22, 83 still in service, also No. 10 (officially written off, but used inside Randwick Shops). No. 21 sold to Waddington's (now Comeng Ltd.) (1940). Remainder scrapped (1938-51); 18 sets of bogies sold to Waddington's.

Breakdown Cars

Ex-C Class: Nos. 56-60s, 115-119s, 125-126s, 130s (13 cars).

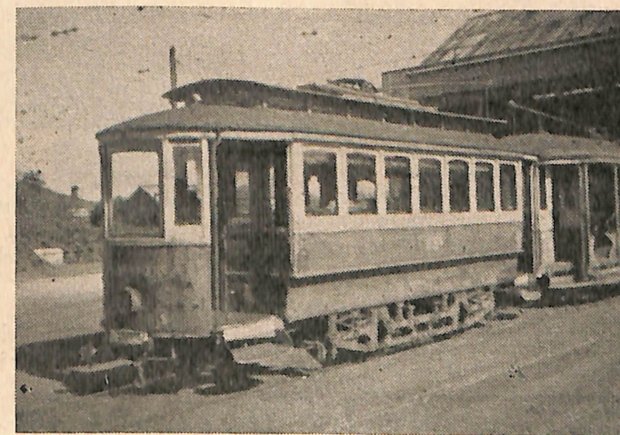
NOTES: Former passenger cars Nos. 12, 11, 7, 13, 29, 290, 291, 86,

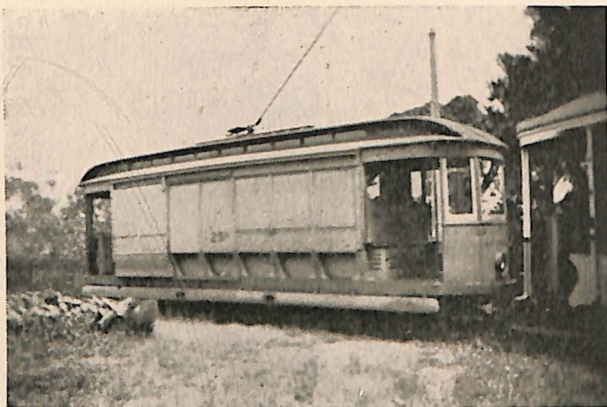


Opposite page (above): No. 93u as advertising car; (below): No. 51u (then numbered 51s) in the builders' yard.

This page (above): U class ballast motor (ex-crane car); (centre): No. 72v; (below): Breakdown car No. 56s (see page 26).

89, 93, 22, 20, 88, respectively, converted for breakdown service 1909-10 (Nos. 56-60) 1914-15 (Nos. 115-119), 1926 (Nos. 125-126), 1928 (No. 130). Had 2 x 50 h.p. (GE203) motors, and were able to tow disabled cars of all classes; also carried tools and equipment for virtually all types of emergency. One or two allocated to each depot. Nos. 119, 126 used temporarily as freight cars (1924). Two still in service as breakdown cars. No. 115s presented to A.E.T.M. Remainder scrapped 1914 (No. 58s), 1951 (Nos. 119, 126s), 1953 (No. 130s), others subsequently.





Ex-Steam Trailer: No. 25s (1 car).

Built: 1904, Randwick Shops.
Type: Single-truck box motor.
Tare: 10.95 tons.
Truck: Sydney No. 1.
Motors: 2 x 48 h.p. (GE67).
Length: 31ft. 5½in.

NOTES: Former single-truck steam passenger trailer built by Brill, U.S.A. (1897), numbered 197 in steam roster. Converted to electric passenger trailer (1900); subsequently motorized and converted to breakdown car. Scrapped (1955).

Ex-Steam Trailer: No. 23s (1 car).

Built: 1902, Randwick Shops.
Type: Single-truck box motor.
Tare: 9 tons (approx.).
Truck: Peckham.
Motors: 2 x 48 h.p. (GE67).
Length: 26ft. 7in.

NOTES: This remarkable vehicle was originally built in 1883 as a double-deck, 6-wheel, steam trailer, with four compartments on the lower deck. Upper deck removed after series of accidents, and lower deck seating increased to 50; fixed wheels replaced by bogies (latter replaced by standard single-truck when motorized).

Ex-O Class: Nos. 140-143s (4 cars).

NOTES: Former passenger cars Nos. 822, 1030, 1229, 1000, respectively. The closed centre compartments were adapted for breakdown service. Intended to replace under-powered single-truck breakdown cars. Have 4 x 40 h.p. (GE238) motors. Converted 1955.

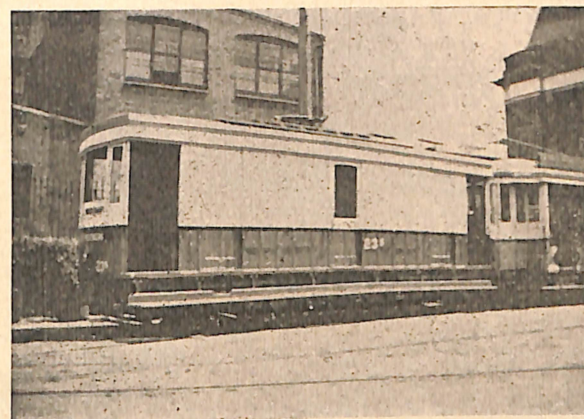


Trailer, ex-C Class: No. 122s (1 car).

NOTES: Former C class passenger car No. 96, converted to breakdown trailer for steam service (1915). Had Peckham truck. Scrapped (1934).

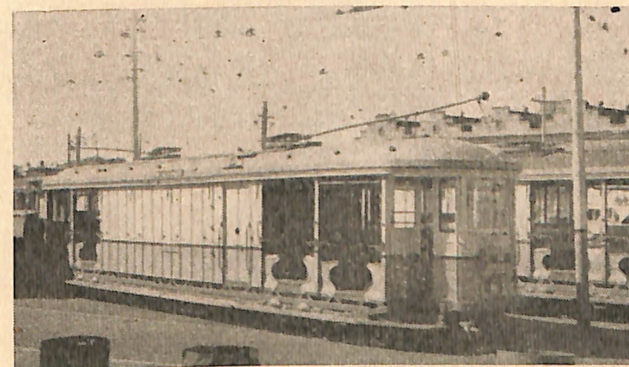
Trailer, ex-Cable: No. 44s (1 car).

NOTES: Former cable trailer (Ocean Street line), later used as electric trailer (1905), and subsequently converted to breakdown car for steam service (1907).



Opposite page (top): No. 25s;
(centre): No. 56s.

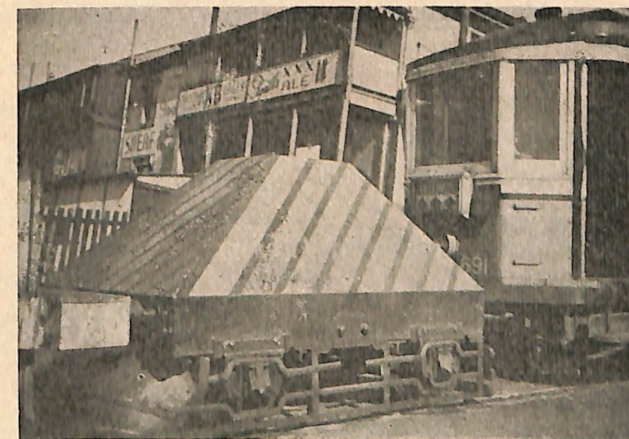
This page (top): No. 23s;
(centre): No. 143s; (bottom):
Counterweight car at buffer stop
at foot of Darling Street.



Counterweight Car

Un-numbered.

NOTES: In service 14/9/03. Used to assist trams on the 1 in 8.24 grade leading to Darling Street Wharf. The car shown was permanently attached to a cable running in a slot located in the centre of the single track. At the top of the hill, this cable passed round a pulley, the other end being attached to a heavy counterweight running on narrow gauge track in a tunnel beside the tramway. The counterweight was heavier than the combined weights of the car and a tramcar. The latter simply closed up on the car and propelled it down



This page (right): No. 123u, showing trays in dumping position; (below): No. 127s.

Opposite page (top): Steam motor using dummy truck to haul railway freight cars; (centre): No. 12B; (bottom): No. 24s (see page 30).

the hill, a massive bufferstop being provided at the bottom to prevent runaways. The counterweight car has been presented to the A.E.T.M.

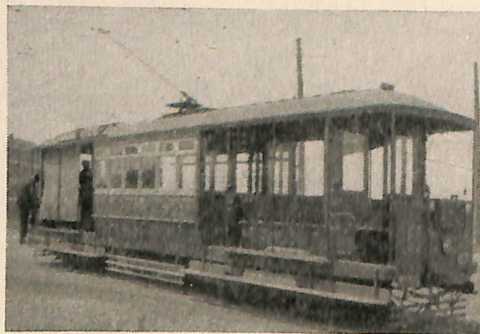


Differential Dump Cars

U Class: Nos. 123-124u (2 cars).

Built: 1925, Differential Car Co., U.S.A. (bodies only).

Type: Bogie dump car.
Capacity: 10 tons.



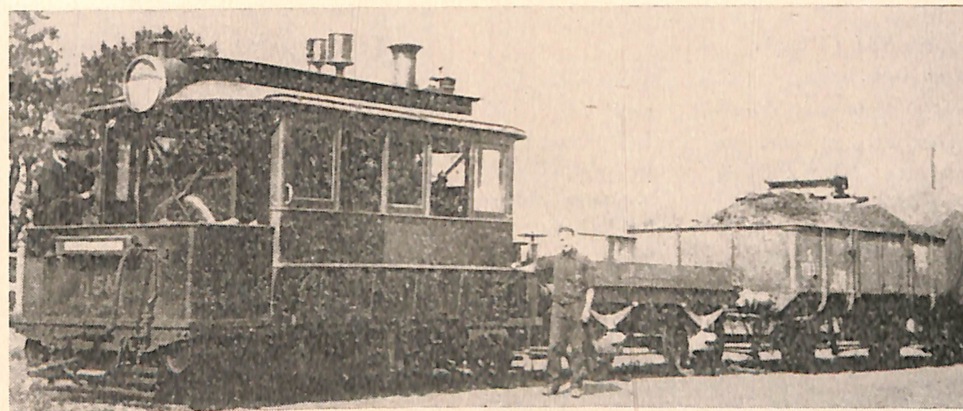
Tare: 20.10 tons.
Trucks: Sydney No. 11.
Motors: 4 x 50 h.p. (MV102).
Length: 41ft. 6in.

NOTES: The largest service cars on any Australian system (similar cars were used on American interurban lines), also the last cars of any kind imported from the U.S.A. Fitted with three power-operated, traversing bins which dumped material clear of tracks; this feature made them unpopular with employees during the Depression (as fewer men were required). After six years of idleness they were scrapped (1939).

Drivers' Instruction Car

No. 127s (1 car).

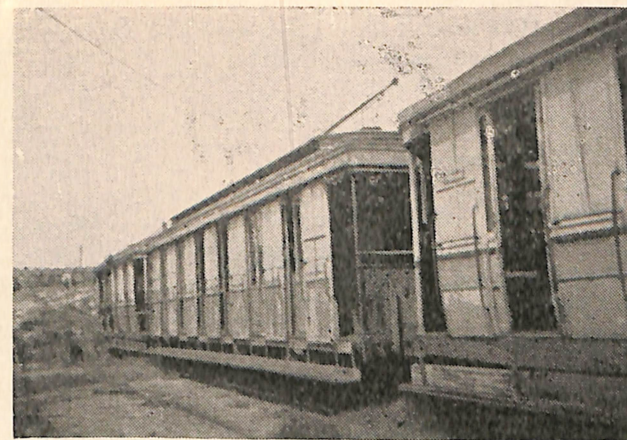
NOTES: Former F class passenger car No. 393 used for instruction of drivers. Structurally unaltered, but classed "S" and renumbered (1927). Presented to A.E.T.M.



Dummy

Nos. 61-63, 120 (4 cars).

NOTES: Four-wheel railway flat cars fitted for coupling to both railway and tramway vehicles. Used to enable railway freight cars to be hauled on both steam and electric tramway routes. Scrapped (1936-7).

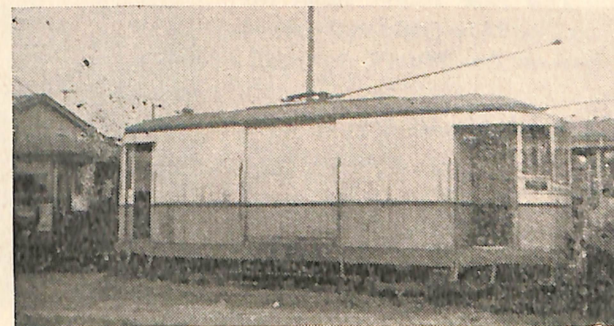


Eyesight Testing Car

No. 12B (1 car).

Built: 1907, Randwick Shops.
Type: Bogie saloon.
Tare: 6.23 tons.
Trucks: Sydney No. 5.
Length: 34ft. 9in.

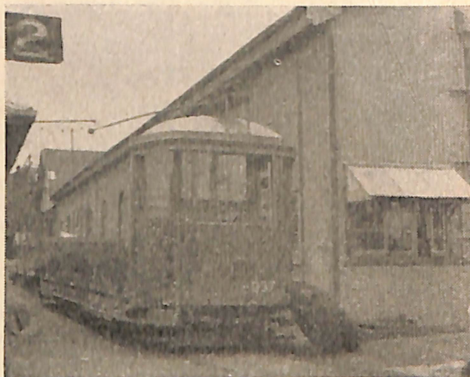
NOTES: Former standard steam trailer, No. 12B, rebuilt with clerestory roof and fitted with equipment for eyesight tests. Trolley pole fitted for lighting purposes only, car being towed to depots as required. Side doors permanently closed and access doors provided on end platforms. Scrapped (1950).



Flat Car

No. 937 (1 car).

NOTES: Former O class passenger car from which body was removed, except for driver's cabin at one end, on which trolley pole is mounted (10/53). Used for towing condemned cars to the "graveyard" and returning motors and other recoverable material from destroyed cars. Known as "horse" or "mule".



Freight Cars

No. 24s (1 car).

Built: 1903, Randwick Shops.

Type: Bogie box motor.

Tare: 11.95 tons.

Trucks: Maguire maximum traction.

Motors: 2 x 48 h.p. (GE67).

Length: 29ft. 0in.

NOTES: Presented to A.E.T.M.

No. 792 (1 car).

NOTES: K class passenger car used for some years as freight car; external appearance unchanged, except for large ladder hung on car side. Subsequently returned to passenger roster.

Haulage Cars

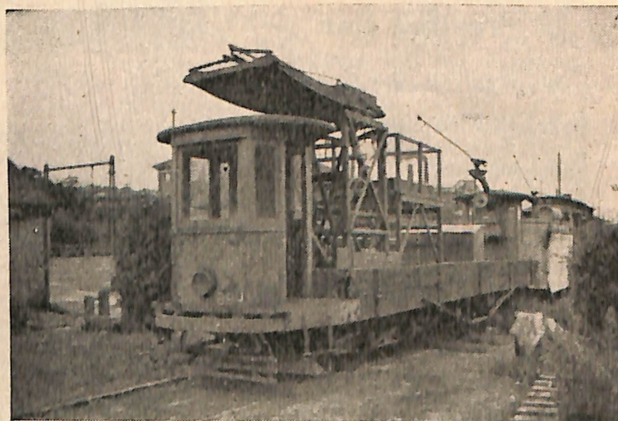
Nos. 128-130s (3 cars).

NOTES: Former C class passenger cars Nos. 34, 85, 88. Converted for use as haulage cars (1928). Had Peckham trucks and 2 x 42 h.p. (GE1000) motors (Nos. 128-129) or 2 x 50 h.p. (GE203) (No. 130). No. 130 converted to breakdown car (1930). Nos. 128-129 scrapped (1935, 1941, respectively).

Hearses

Nos. 27, 45s (2 cars).

NOTES: Used on Newcastle system only. Details in separate publication.



This page (top): Motor flat car No. 937; (right): Overhead line car No. 99u.

Opposite page (top): Rail-grinder No. 3; (centre): Rail-grinder No. 5.

Overhead Line Car

U Class: No. 99u (1 car).

NOTES: Former ballast motor converted (1932) to line car for servicing overhead on Wynyard underground section and on Harbour Bridge. Other details as ballast motors Nos. 86-98u.

Reciprocating Grinders

Nos. 1-2, 4-5 Cars.

(Grinders are numbered in a separate series.)

Length: 14ft. 0in. and 16ft. 5in.

Tare: 6.00 tons.

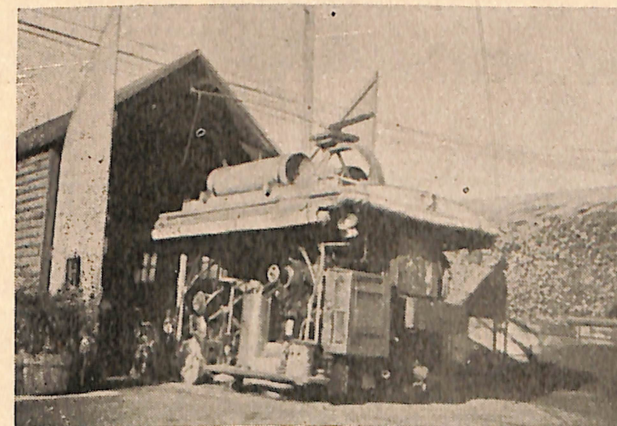
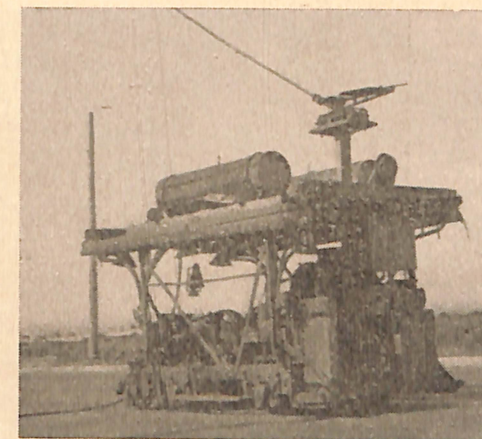
NOTES: "Essanee" type.

No. 3 (1 car).

Length: 21ft. 0in.

Tare: 11.00 tons.

NOTES: Woods-Gilbert type.



Scrubber Cars

Ex-D Class: Nos. 43, 112, 131-137s (9 cars).

Built: 1909 (No. 43), 1929-31 (others).

Type: Single-truck carborundum track scrubber.

Tare: 12.25 tons.

Trucks: Sydney No. 1.

Motors: 2 x 60 h.p. (GE275F) (Nos. 43, 133-135); 2 x 48 h.p. (GE67) (others).

Length: 29ft. 11in.

NOTES: No. 43s rebuilt from passenger car, for breakdown service (1905) and has arch roof; converted to scrubber, 1931. Most now scrapped (No. 131s in 6/50). No. 133s originally had GE67 motors.

Ex-K Class: Nos. 138-139 (2 cars).

Built: 1952-3, Randwick Workshops.

Type: Single-truck track scrubber.

Tare: 11 tons (approx.).

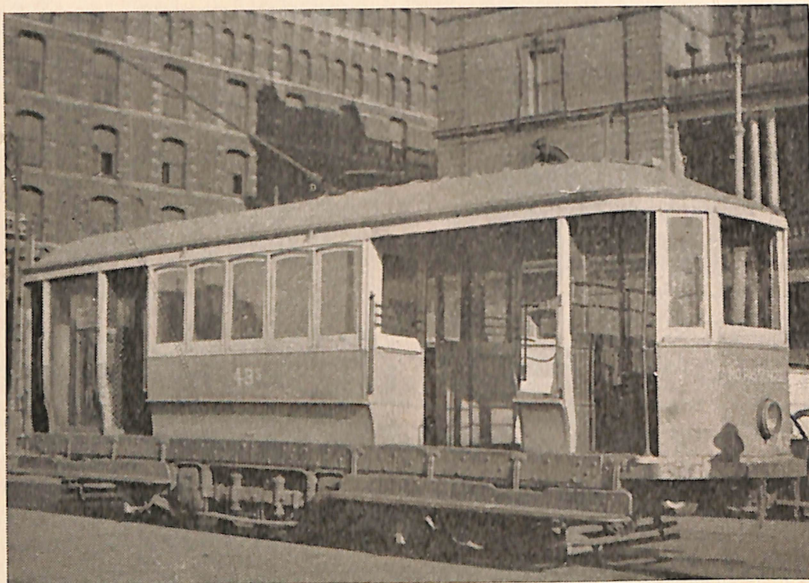
Trucks: Sydney No. 1 (Brill 21E, 7ft. 6in.).

Motors: 2 x 60 h.p. (GE275).

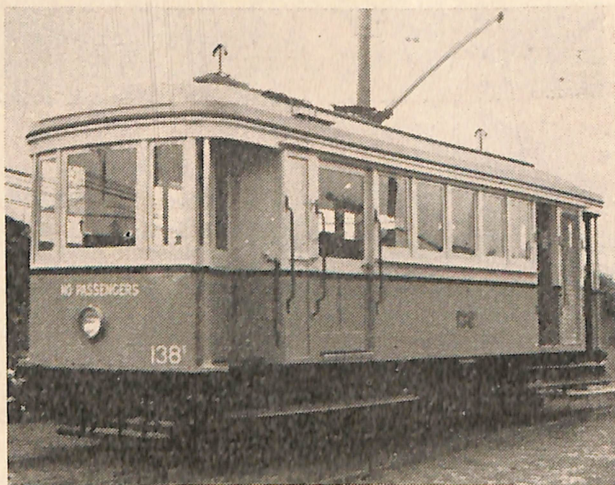
Length: 29ft. 2in.

NOTES: Converted from K class passenger cars Nos. 763 and 797. Fitted with higher-powered motors and extra resistances for continuous slow-speed running.

(Illustrations on next page)



This page (above): Scrubber No. 43s; (below): No. 138s.
 Opposite page (top): Scrubber No. 134s; (centre): No. 105w; (bottom):
 No. 28w (from plans).



Sprinklers

W Class: Nos. 30-35w (6 cars).

Built: 1903-04.

Type: Bogie tank car.

Capacity: 2,000 gallons.

Tare: 15.42 tons.

Trucks: Brill 27G (maximum traction).

Motors: 2 x 48 h.p. (GE67).

Length: 28ft. 6in.

NOTES: No. 30w used to propel small 4-wheel truck for track cleaning (1926). Scrapped (1940, except No. 32w—1950).

W Class: Nos. 29, 53-55, 100-105, 113-114 (12 cars).

Built: 1903 (No. 29), 1910 (Nos. 53-55), 1912-1914 (Nos. 100-105, 113-114).

Trucks: Sydney No. 3A (Nos. 53-55), Sydney No. 6 (Nos. 102, 113), Sydney No. 10 (Nos. 29, 100-101, 103-105, 114).

Motors: 4 x 50 h.p. (DK83) (No. 29), 4 x 48 h.p. (GE67) (Nos. 53-55), 4 x 50 h.p. (DK9A3) (Nos. 100-105), 4 x 50 h.p. (GE203) (No. 114), 4 x 60 h.p. (GE275) (No. 113).

(Other details as Nos. 30-35)

NOTES: No. 54w fitted with track brakes and groove cleaner (1916), later was carbide sludge tank at Randwick Shops, subsequently resuming normal functions. No. 55w used for a time as weedkiller spray car. No. 113w fitted with groove cleaner (1953), and still in service. Others scrapped (1940, except No. 29—1951).

W Class: No. 28w (1 car).

Built: 1900, Randwick Shops (?).

Type: Single-truck tank car.

Capacity: 1,700 gallons.

Tare: 9 tons.

Truck: Brill 21E.

Motors: 2 x 42 h.p. (GE1000).

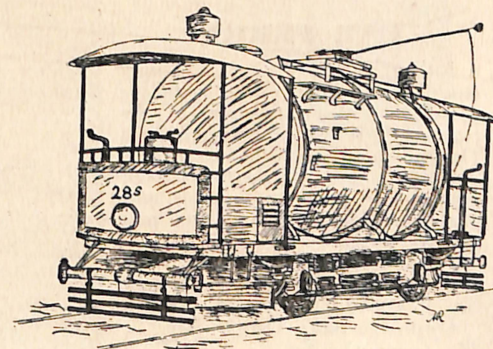
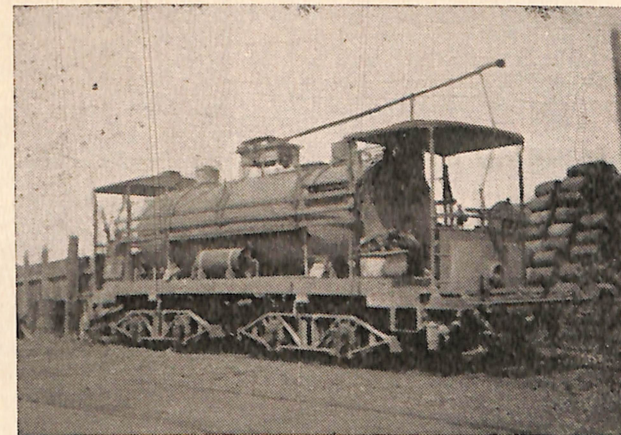
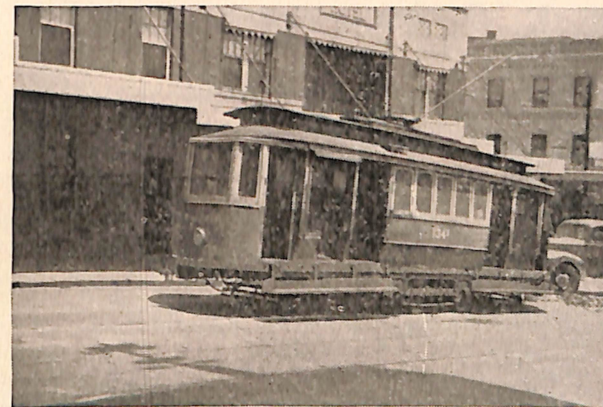
Length: 18ft. 0in.

NOTES: Used mostly on the Manly system. No photograph of this car has been traced. Scrapped (1934).

Sprinkler Trailers

X Class: Nos. 36-41 (6 cars).

Built: 1880, 1884, 1887, 1890, 1891, 1895, respectively.



Type: Bogie tank car (rectangular tanks).
Capacity: 2,600 gallons.
Tare: 5.83 tons.
Trucks: Sydney No. 5.
Length: 21ft. 7in.

NOTES: Built for steam service and had vacuum brakes, but subsequently numbered with electric service stock. All scrapped by 1912.

Steam Motor

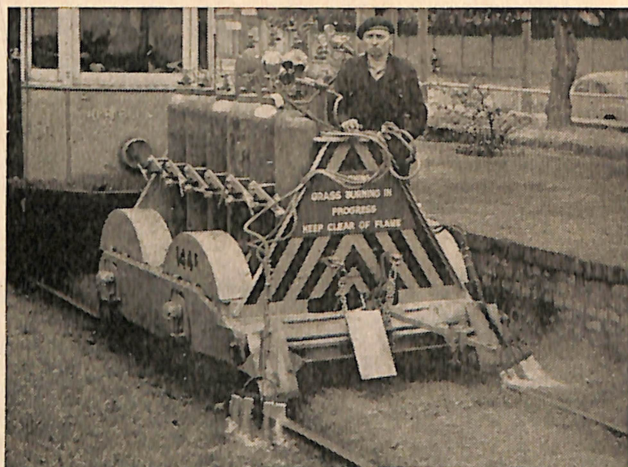
No. 61.

NOTES: Standard steam motor retained at Randwick Workshops for shunting, etc.

Weedkiller Car

No. 144s (1 car).

NOTES: This curious but useful vehicle was built (1956) around the frame of a bogie from a cancelled R1 class car, with wheels, etc., from a scrapped O class. It is propelled by another service car and destroys weeds by means of flame jets so directed as to avoid heating rail surfaces.



Welding Car

No. 121s (1 car).

NOTES: Former C class passenger Car No. 82 converted (1916). Scrapped (1926).

Work Shunters

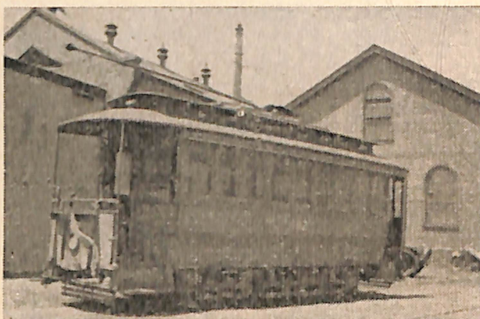
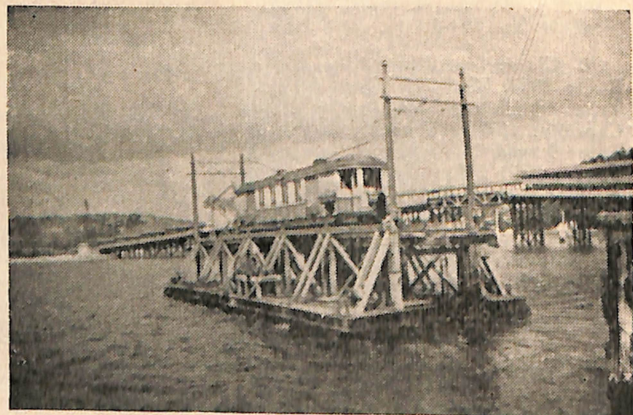
Nos. 33, 92 (2 cars).

NOTES: C class passenger cars (unaltered) used for shunting at Randwick Shops. Retained passenger numbers. No. 92 scrapped (1951).

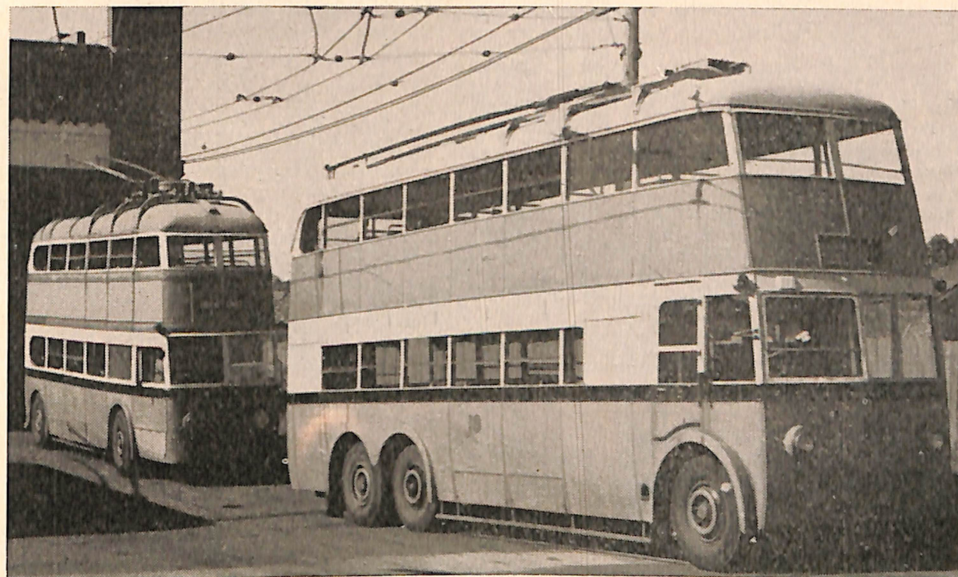
CAR FERRY

Although not strictly "rolling stock", no Sydney roster would be complete without mention of the tramcar ferry which operated from The Spit across Middle Harbour to Sealorth. Passengers were not carried from the Manly system were carried, but all cars transferred to and on this vessel.

This page (top to bottom):
No. 92s, No. 144s, Car Ferry.
Opposite page (top): Nos. 5, 16; (centre): No. 2.



TROLLEYBUSES

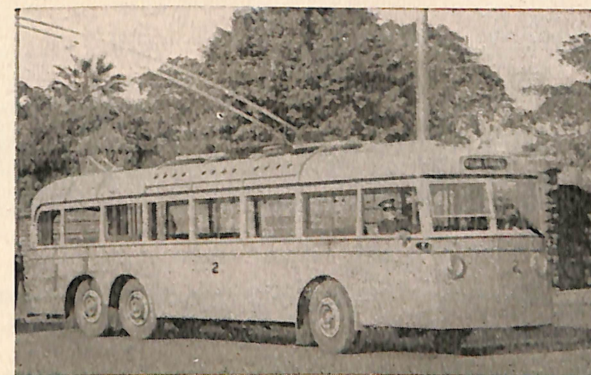


Nos. 6-26 (21 vehicles).

Built: 1937, Ritchie Bros.
Type: Double-deck, 3-axle.
Capacity: 60 seats.
Chassis: Leyland (Nos. 6-16);
A.E.C. (Nos. 17-26).

Tare: 8.65 tons.
Motor: 1 x 90 h.p. MV201-DT.

NOTES: Built for Kogarah system. Largest double-deck vehicles in Australia. Several rebuilt and strengthened from 1949 on. Have stairways and entrances at either end (hence relatively low seating capacity). Fitted with sliding shoe collectors (older trolleybuses had trolley wheels).



Nos. 3-5 (3 vehicles).

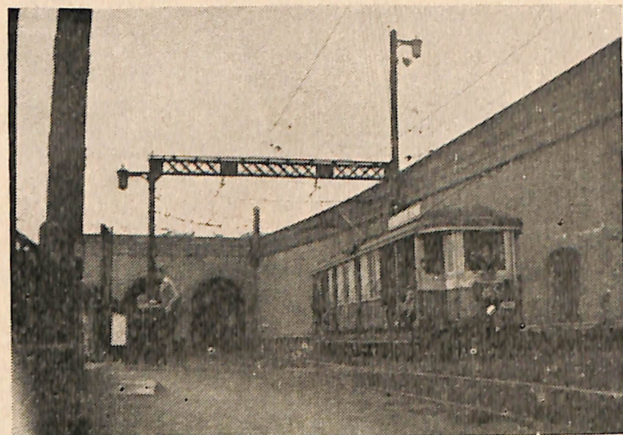
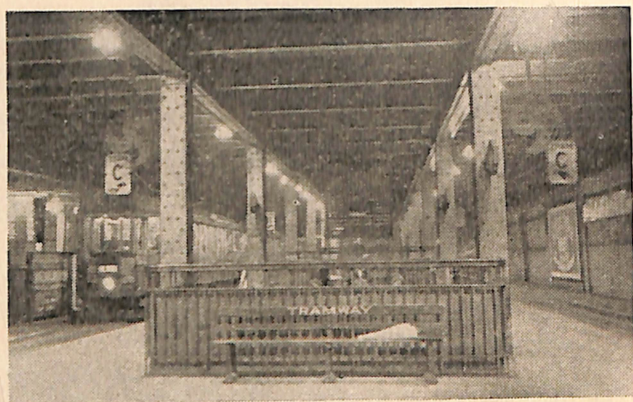
Built: 1934, English Electric (No. 3); 1936
(No. 4), 1937 (No. 5), both Syd Wood.
Type: Double-deck, 2-axle, front entrance.

Capacity: 63 seats (33 upstairs), plus standees on lower deck only.
Chassis: A.E.C.

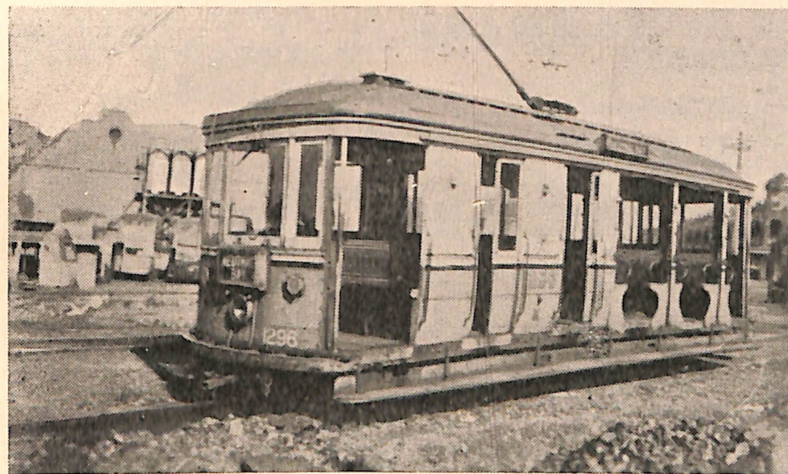
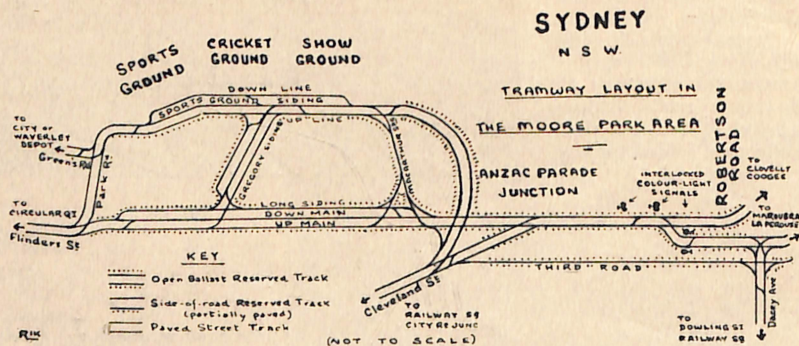
(Continued on page 38)

MISCELLANEOUS

The tramway connection across the Harbour Bridge was opened with the bridge in 1932, enabling North Sydney cars to reach the city. The tracks used were originally intended for suburban electric trains, and several novel features were incorporated in the tramway because of



this. Catenary suspension was used for the overhead and trams used railway platforms, levels being adjusted by raising the tracks on wooden ramps. At the city end, trams ran underground from Argyle Street to Wynyard. Automatic color-light signals were provided in the tunnels, and there was an interesting signal cabin set into the tunnel wall.



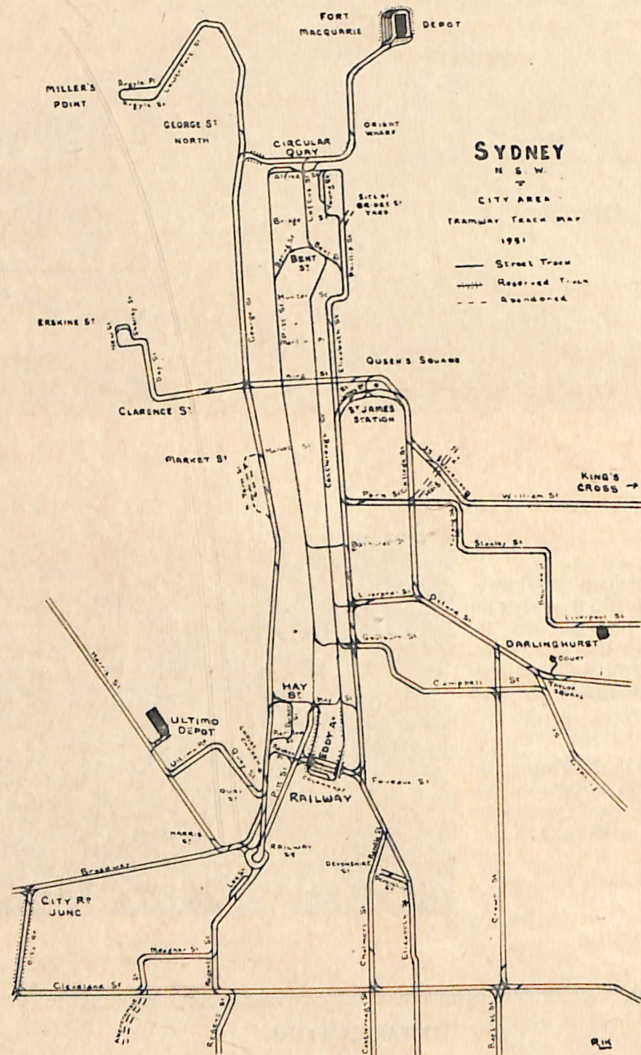
Opposite page (top): Tramway platforms at Wynyard underground station, during a quiet period; (centre): Argyle Street stop, on the Bridge Approach, at the entrance to the subway.

This page (top): K class No. 1296 (No. 2 end); (right): interior of R1 class car (post-war R1's have lined ceilings).



TRACK WORK

Sydney has always had elaborate and unorthodox track layouts, both on lines used regularly and on those provided for major sporting facilities. Most notable of these layouts are at Moore Park (opposite) and the Randwick Racecourse. The size of the Moore Park area can be judged from the illustration on page 4 in which the camera was located outside the Show Ground.



This map of tramways in the city centre shows the unconventional track arrangements. Not shown is the Harbour Bridge line which crosses the Miller's Point line at its northernmost point, subsequently diving underground to terminate at Wynyard station just north of King Street.

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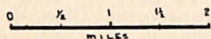
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