

The Golden City and its Tramways

Ballarat's tramway era



Alan Bradley

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Using the wealth of the 1850s goldrushes the founders of Ballarat built a magnificent provincial city. With its elegant Victorian buildings, wide main street, the Botanical Gardens, and Lake Wendouree, it made a fine location for a municipal tramway system. It is a very photogenic city, which from the time of the horse trams, has attracted skilled photographers whose work illustrates this book. Ballarat was a lively city with many factories, theatres, cinemas, schools, and sporting clubs; all of which benefited from the trams.

This book is not a dry, technical history, but describes how the citizens of Ballarat used the trams in their daily life, going to work, school, shopping, sport, and entertainment. It shows how the trams, and the "trammies" that worked on them, served the city and reflected its character. It brings to life the difficulties experienced in the second world war, when lights were dimmed, petrol severely rationed, and the trams became an essential means of transport for everyone.

This book is more than a social history. It tells how the rise and fall of Ballarat's gold industry affected its tramway system. It also addresses the technology, economics, politics, management, working conditions, and competition from other forms of transport.

The author has spent over twenty years gathering information, anecdotes and illustrations from the people who worked on the trams, as well as from books, newspapers and archives to present this fascinating account of trams in Ballarat.

Front cover
Ballarat's electric tram system was newly opened when passengers and crew of an early electric tram posed for the photographer in lower Sturt Street.

Photo: Ballarat Municipal Library



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Passengers enjoy the view from the top deck of a seven-window horse tram in the Botanical Gardens Reserve. Some horses have already left evidence of their passing on the unsealed roadway.
Photo: Ballarat Tramway Museum

THE GOLDEN CITY AND ITS TRAMWAYS

BALLARAT'S TRAMWAY ERA

by

Alan Bradley

BALLARAT TRAMWAY MUSEUM INC.
Ballarat 2005

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Imperial conversions

This book uses the units of measurement that applied at the time.

Imperial currency was used during the first 79 years of the tramway system. On 14 February 1966 Australia converted to decimal currency. Imperial measurements were used throughout the entire period of operation of the Ballarat tramways. During the 1970s Australia gradually converted to the metric measurement system.

Conversion from imperial currency or measurements to their decimal or metric equivalents, to two decimal places, can be made from the following table. Where an abbreviation is used in the book it is shown here.

| Imperial | Decimal/metric equivalent |
|-------------------------------------|----------------------------|
| Currency | |
| 1 penny (abbrev. 1d) | 0.83 cents |
| 1 shilling (abbrev. 1s) = 12 pence | 10 cents |
| 1 pound (abbrev. £1) = 20 shillings | 2 dollars (abbrev. \$2.00) |
| Length | |
| 1 inch | 2.54 centimetres |
| 1 foot = 12 inches | 0.30 metres |
| 1 yard = 3 feet | 0.91 metres |
| 1 mile = 1,760 yards | 1.60 kilometres |
| Weight | |
| 1 pound | 0.45 kilograms |
| 1 ton = 2,240 pounds | 1.01 tonnes |
| Area | |
| 1 acre = 4,840 square yards | 0.41 hectares |

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Front endpaper: Horse tram No.16 heads west along Sturt Street past the Burke and Wills Fountain, the Ballarat Town Hall and several horse cabs.
Back endpaper: Tram No.30 at the same location on 24 September 1958, with the fountain and Town Hall still a dominant feature. The horse cabs are long gone, and the motor car has made its presence felt.
Photo: Ballarat Tramway Museum collection
Photo: Collection of N.J. Simons

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I thank organisations and individuals whose photos were used. They are acknowledged in the captions.

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Finally I thank my mother Margaret Beattie and my wife Nicole Bradley for their support and encouragement over the years.

Alan Bradley, June 2005

Glossary of terms

- Air brakes:** Brakes activated by use of compressed air against a piston, connected to brake shoes which are forced against the wheel.
- Ballast:** Material such as gravel or broken rock placed between and under sleepers to give stability and provide drainage to track.
- Bogie:** See "truck".
- Bogie tram:** A tram with a body mounted on two trucks, one at either end.
- Bracket arms:** Metal rods attached to poles used to support tramway overhead wire.
- Bulkhead:** A wall separating compartments in a tram.
- Cable tram:** A tram fitted with a grip which protrudes through a slot in the roadway, gripping a moving cable beneath the road.
- Compressor:** Maintains the air pressure used to operate air brakes, sand valve and windscreen wipers on an electric tram.
- Conductor:** Collects fares from passengers on a tram.
- Conny:** Colloquial for "conductor".
- Crossbench car:** A tram with seats placed across its body, usually with open sides.
- Crossover:** Where one tram line crosses another on the same level.
- Drop end/Drop centre car:** A tram with the end and/or centre section at a lower level to ensure an easier step height.
- Fan:** A layout of tracks at the front of a tram depot.
- Gauge:** The width of the track between the insides of the rails.
- Knifeboard seating:** Back to back seats placed lengthways along the middle of a tram.
- Lifeguard:** A flat tray placed under the tram that falls to rail level if struck by an object, preventing the object going under the wheels of the tram.
- Loop:** A short section of double track on a single line where trams can pass.
- Magnetic brake:** Braking by means of electro-magnetic attraction between brake shoes and rails.
- Maximum traction truck/bogie:** A truck with two large powered "driving wheels" and two small unpowered "pony wheels".
- Motorman:** Electric tram driver.
- Mullock heap:** Mining refuse dumped onto a pile.
- Overhead/overhead wire:** See "trolleywire".
- Points:** A junction of two sections of track that can be altered so that a tram can run on either line.
- Safeworking:** Any system that controls movement of trams on a length of single track, to prevent collisions between trams.
- Sand button:** A button placed on the floor to allow sand to be dropped near the wheels to prevent wheel slip.
- Scrubber:** A tram fitted with carborundum scrubbing blocks for removing track corrugations.
- Single truck tram:** A tram with a body placed on one truck.
- Sleepers:** Timbers that form the track bed to which rails are fastened.
- Span wire:** Supporting wires strung over a roadway to hold up tramway overhead wire.
- Special work:** Points and crossovers.
- Sprinkler:** A tram fitted with a water tank and sprinklers to spray water on the road to control dust.
- Staff:** A baton carried by each tram entering a section of single track, allowing use of that length of track, to prevent collisions between trams. In Ballarat they were marked with the names of the loops between which the staff was used.
- Stringers:** Separate concrete blocks on which rails are placed.
- Straight sill:** A tram with a straight frame and floor with no drop end or centre section.
- Tie bars:** Thin metal rods placed between the rails, used to keep track at its correct gauge.
- Tower wagon:** A road vehicle (either horse drawn or motorized) that is fitted with a tower to allow maintenance of overhead wire.
- Trolley bus:** An electric bus fitted with trolley poles that connect to the overhead wire to draw electric power to the motors.
- Trolley pole:** A pole fitted to the tram roof that connects to the overhead wire to draw electric power to the motors.
- Trolley rope:** A rope fitted to the trolley pole that enables the pole to be placed on the trolleywire or secured to the tram.
- Trolley wheel:** A small wheel fitted to the top of the trolley pole that rolls along underneath the trolleywire.
- Trolleywire:** Copper wire strung up above the tram track, which is energised by electric current to power electric trams. Also known as "overhead/overhead wire".
- Truck:** A four-wheel carriage on which a tram body is mounted. Also known as "bogie".

Abbreviations

| | | | |
|--------|---|------|--|
| AC | Alternating current | CRB | Country Roads Board, Victoria |
| ATEA | Australian Tramway Employees' Association | DC | Direct current |
| ATMOEA | Australian Tramway & Motor Omnibus Employees' Association | ESCO | Electric Supply Company of Victoria |
| BIWCo | British Insulated Wire Company | LPG | Liquid petroleum gas |
| BTCo | Ballaarat Tramway Company Limited | MMTB | Melbourne & Metropolitan Tramways Board |
| BTM | Ballaarat Tramway Museum | RACV | Royal Automobile Club of Victoria |
| BTPS | Ballaarat Tramway Preservation Society | RSL | Returned Servicemen's League |
| Cr. | Councillor | SEC | State Electricity Commission of Victoria |
| | | TRB | Transport Regulation Board, Victoria |

Foreword

By Peter Hiscock formerly Director of Sovereign Hill, Ballarat

IN THE Edwardian era, post-cards of Ballarat's Sturt Street, presented an almost Parisian elegance. The broad central medians offered both European trees and classical sculpture and flower beds behind neat iron fences. In summer there were canvas awnings to shelter the upright plants and citizens from the sun; in winter snow could bring its own transformation. Almost every photographer waited until one of those symbols of progress – an electric tram came gliding into the frame. This was a city which took itself seriously.

It is not surprising that some of these postcards have found their way into Alan Bradley's book. But this is a history which takes itself seriously. It is a book overdue, for it takes the first detailed look at Ballarat's public transport system spanning a period of over 110 years. It does not neglect the trams' precursors: the waggonettes, the cabs and the horse-omnibuses. The horse-trams afforded the first leap in productivity, for a given pair of horses on fixed rail could haul more, but it was the electrification which provided the giant leap giving a certainty to both operators and public as the system expanded. The transition from horses and the complexities of the gradual electrification of the City have been well-researched and they lead to a lively narrative.

We get a picture of the infrastructure behind the system and the men who were its public face. Men almost universally, for the conductresses introduced out of necessity during the second world war slipped away as returning men were re-engaged. The system was rehabilitated by the SEC with trams purchased from the MMTB, and in the decade after the war, when the public was prosperously hard up (that is they all had work but few had cars) the trams had their finest hour.

In 1971, only a few months after Sovereign Hill opened its doors for the first time the tramway closed. Whilst some at that time saw the possibility of a tram linking its fledgling Outdoor Museum with the City and perhaps even its historic Botanical Gardens, the idea was not taken up. Sovereign Hill went on to draw up to 600,000 visitors a year giving it pre-eminence among Outdoor Museums in Australia. The trams became marooned on a short length of track skirting the Botanical Gardens, and that, not without a battle.

Those fighting for the retention of part of the system in the early 1970s were sorely tried.

Looking north they could see that fellow-preservationists in Bendigo were making considerable headway. The Bendigo Trust had not only retained the entire fleet but also access to the SEC Tram Depot. In Ballarat, they had to stand by and watch the tracks being hastily torn up and the infrastructure sold. To their eternal credit, the Ballarat Tramway Preservation Society persevered in their negotiations with a then unsympathetic Council and got on with the business of retaining critical plant.

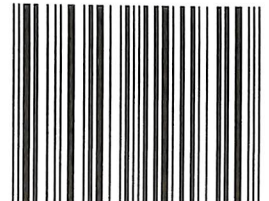
As Director of Sovereign Hill for 22 years from 1980, I held to the hope of redressing the position. I felt that a historically significant tramway, linking Sovereign Hill, the City and the Gardens would provide a wonderful illustration of what Ballarat achieved in the post 1861 period. I found the BTM executive supportive. Despite strong public interest and the funding of two exploratory studies, as described in this book, it has not come about. The process left me with an acute awareness of two things: the great affection shown by so many Ballarat people for the trams and the professionalism and curatorial-integrity of the Ballarat Tramway Museum people. Their commissioning of "The Golden City and its Tramways" underpins their serious endeavour and adds to the public history of this City in an admirable way.

Peter McL. Hiscock, May 2005



Ballarat trams are Ballarat History

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