



INTRODUCING OUR TRAMS



Name: _____

School: _____

Introduction

As part of our commitment to the community of Auckland, we take great pleasure in hosting school visits to the **Dockline Tramway**.

To enhance school visits and to provide a clear education focus we provide topic specific units, with relevant **information** and on-site **student activities**.

The topic units range across **primary, intermediate** and **secondary** school and teachers can select those suitable for their students. Activities have been developed with the **curriculum skills** in mind.

Although the over-all approach, in terms of subject is broadly cross-curricular, units are currently provided with links to the following subject areas:

- Science
- Social Sciences
- Technology
- Geography

We also have plans in the future for topic units with links to Art, History of Art and Classical Studies.

Also provided is **background material** on Auckland's trams and tramway network. A 10 minute video showing the history and impact of the tramway system is available to be shown, in the barn, on request.

All educational resources may be downloaded free. Any feedback on how we may further assist you with our educational resources would be much appreciated.

Compiled by Susan Walker & David Maciulaitis
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Photographs by David Maciulaitis unless otherwise stated



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Auckland Tramway History

Auckland City had horse-drawn trams from 1884. The electric tram network was officially opened on 17th November 1902. Opening of the public service was delayed a week because eleven Motormen (tram drivers) coming over from Sydney, Australia, were on board the SS Elingamite, which sank near Three Kings Islands on 9th November 1902. Three of their number were drowned, so to enable them to recover from their ordeal, the tramway service commenced a week later, on 24th November 1902, and continued until the 29th December 1956.

The electric tramway system was built by a private enterprise. The Auckland Electric Tramway as it was known was taken over in July 1919 by the Auckland City Council and then in January 1929, the Auckland Transport Board was formed to take over operations. The fleet comprised of 256 trams of varying shapes and sizes.

There were three depots where trams could be stored and have basic servicing done: one on corner of Gaunt and Halsey Street, Central Auckland. One on the corner of Greenlane Road and Manukau Road, Epsom; and one on the corner of Jervois Road and Wallace Street, Ponsonby. The Auckland Dockline Tram passes the former Gaunt Street depot on its tour. The main Workshops for tram rebuilds was in Manukau Road, Royal Oak, opposite Cornwall Park.

To put the significance of trams into perspective, in the late 1940's during the rush hour no fewer than 264 trams would ply Queen Street!

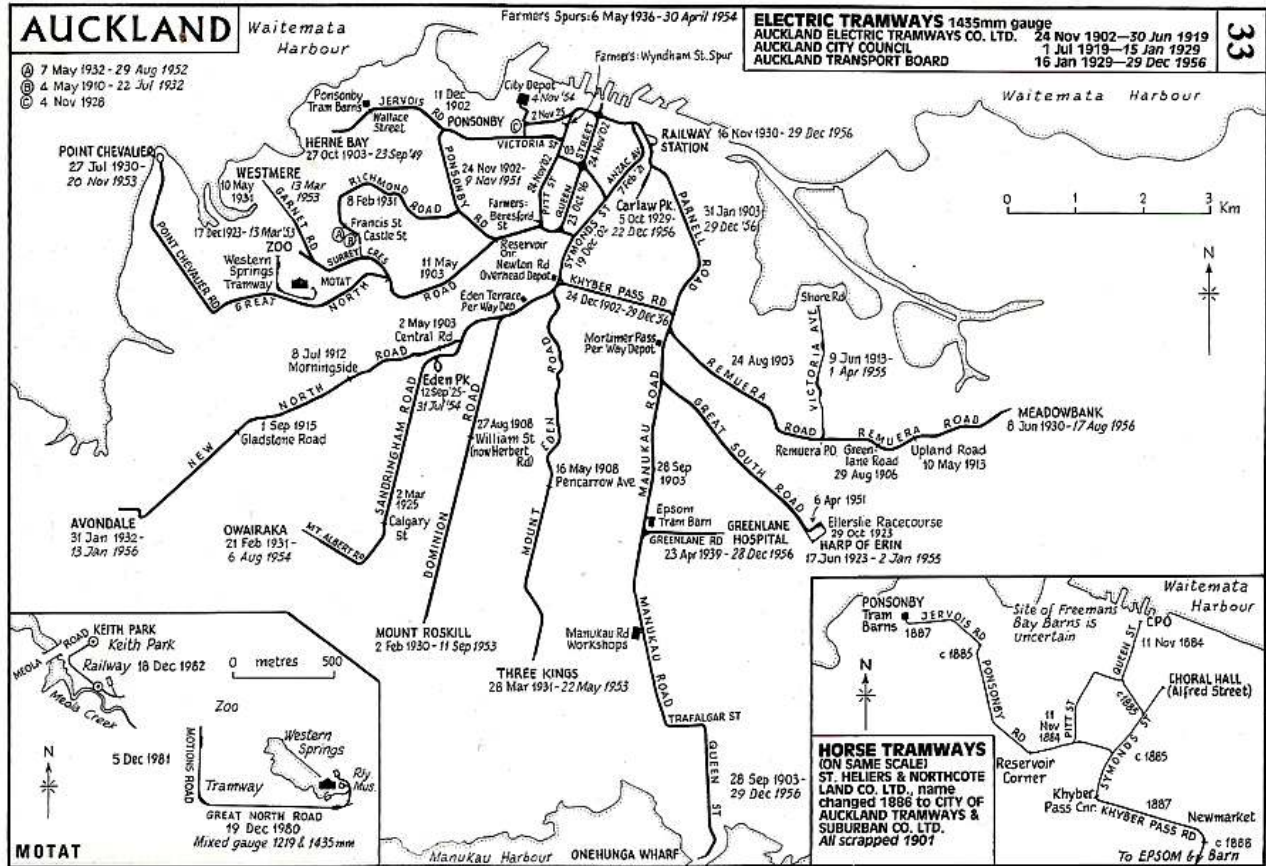
In 1957 the Old Time Transport Preservation League was set up at Matakoho, Northland with the aim of preserving some of Auckland's trams. In 1963 the Museum of Transport and Technology (MOTAT) was set up and the Western Springs Tramway commenced operations on 16 December 1967.



Auckland Tram number 44, built in Ponsonby in 1906 by the Auckland Tramways. This was the first tram to be built in Auckland. Restored by the Western Springs Tramway, MOTAT.

Auckland's Network

The Auckland Tramway network covered approximately 72 km's of city and suburban streets and was the only true coast-to-coast tramway in the world, from the Tasman Sea at Onehunga Wharf to the Pacific Ocean at the foot of Queen St, by the Ferry Building.



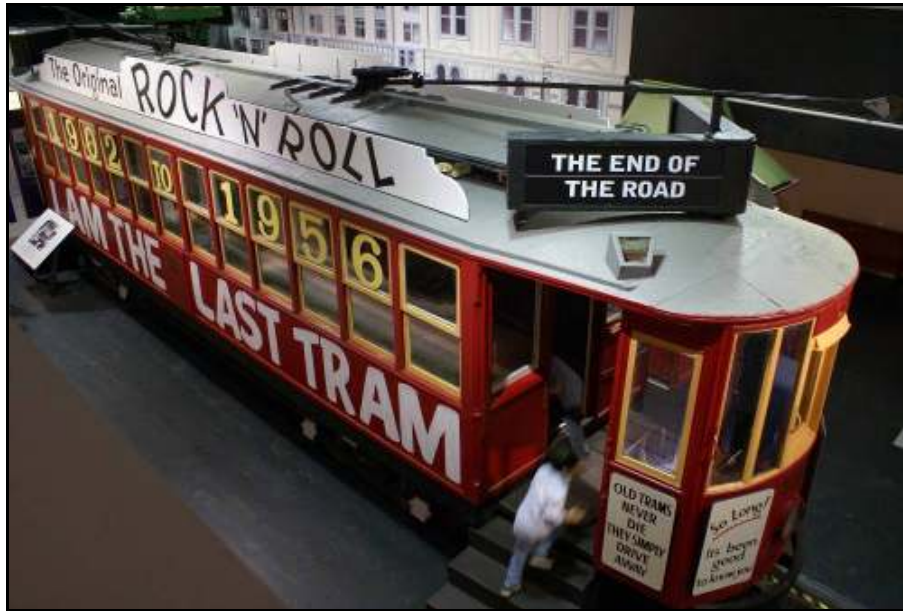
Auckland Tramways Route map
 Quail Maps Ltd

The invention of electric trams meant that for the first time large numbers of people could be transported quickly and efficiently. This changed the development patterns of our cities allowing rapid expansion of housing, commerce and industry over wider areas. This is clearly illustrated in the map above.

Social change followed, as the motor car was in its infancy and well beyond the reach of most people, the tramway provided a quick, reliable and cheap form of transport to work, beaches, parks and entertainments such as picture theatres and dance halls. Many of our older passengers recall their courting days on the trams.

Why did trams stop running in Auckland?

During WWII trams were heavily used as an important form of transport, as petrol was in low supply and trams were a cost effective and fuel efficient (ie; electric powered) solution. The trams and tracks soon became worn out and many were beyond repair. When the war was over new houses were built beyond the end of the tramlines. The trams were gradually replaced by buses, and stopped operating altogether in Auckland on 29th December 1956.



How the last tram in Auckland looked in December 1956, MOTAT

What about trams in the Future?

In some areas of the world trams are being brought back to solve one of the problems for which they were once blamed – traffic congestion and pollution. Modern trams are very fast, quiet, smooth riding and environmentally friendly. Modern tram systems operate all over the world, but some of the most well known cities are Melbourne, Amsterdam, and Hong Kong, with new systems opening all the time.



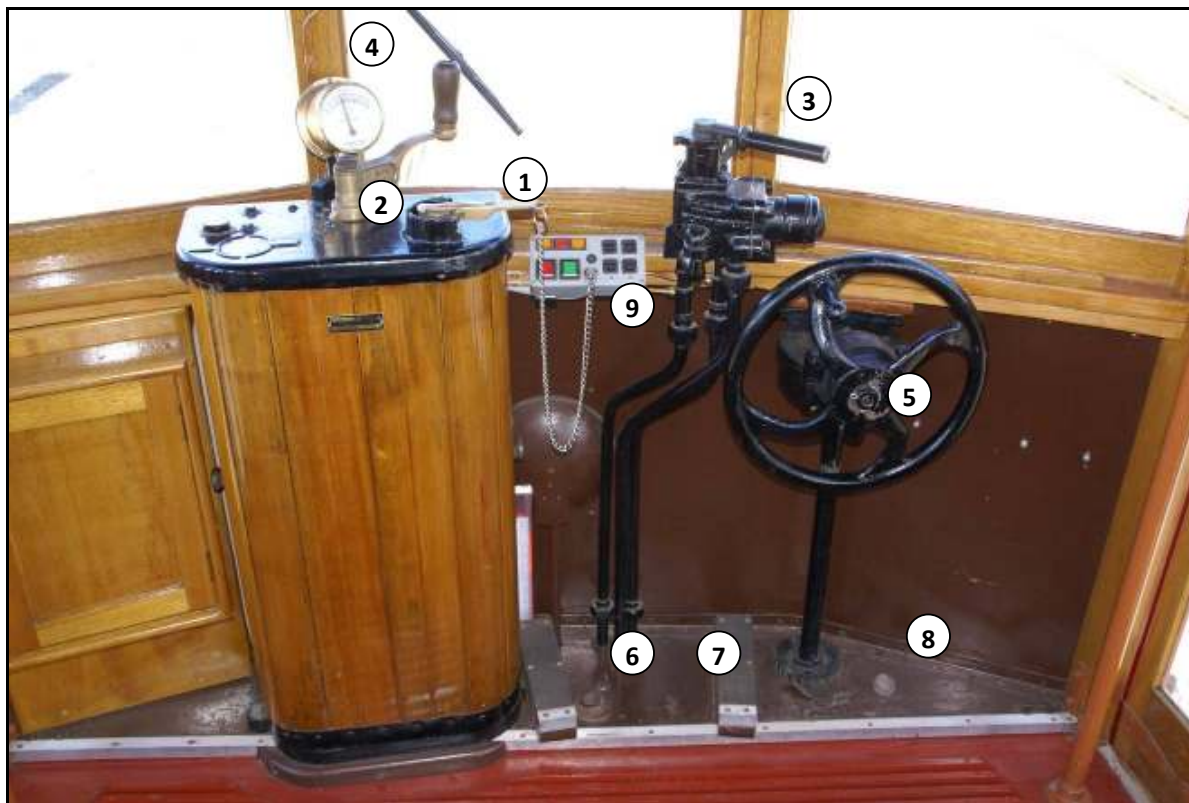
How do trams work?

Electric trams are either powered by two or four electric motors which sit underneath the tram between the wheels. If you look above each tram you will see a large trolley pole connected to overhead wires. The pole conducts the electricity to the motors. If you listen you can hear the motors under the floor of the tram. The driver governs the speed of the tram with a handle called a controller which regulates the amount of electricity to the motors. A 'key' sets the direction of the tram, and can be placed in forward, backwards or neutral position.

There are two systems of braking a tram. One uses an air brake, the air pressure coming from a compressor, the other uses a hand brake operated by a wheel or handle. The driver of these trams needs a good strong right arm. These two methods operate cast iron brake shoes and push them against the wheels.

Three separate foot buttons allow the driver to ring the gong, apply sand to the rails in an emergency braking situation and to retract the man catcher or life guard if it drops.

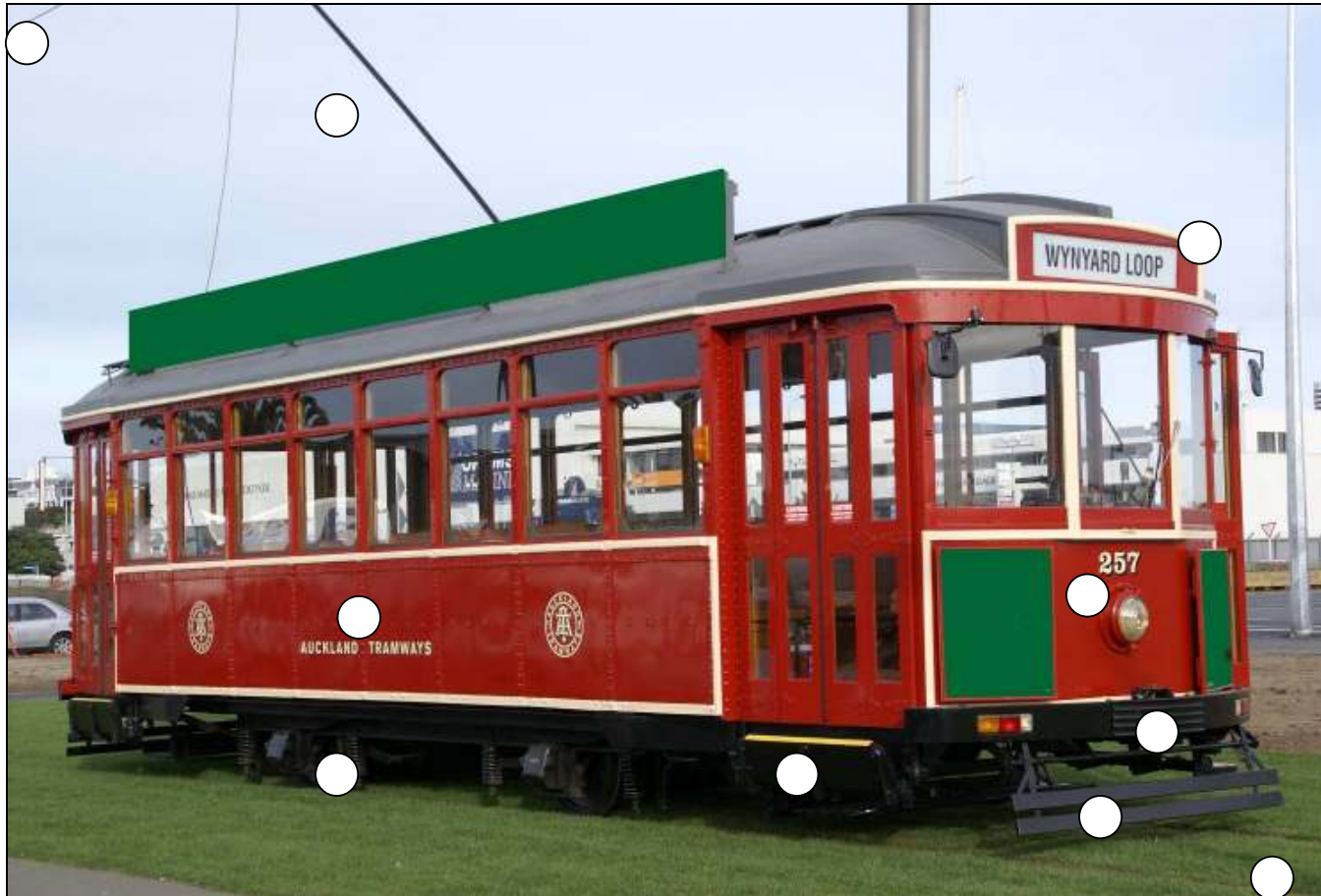
The frame which contains the motors and on which the tram body rides is called a truck or bogie. Short trams usually only have one truck with only two motors. Our tram No.257 is of this type. Longer trams have two trucks or bogies each with up to two motors on each bogie (ie four axles, with up to four motors). These trucks or bogies swivel as the tram goes around corners. Our No.258 is of this type.



(1) Direction Key, (2) Controller, (3) Air Brake Handle, (4) Air Brake Gauge, (5) Hand Brake Wheel, (6) Foot Button for Gong (7) Sanding Button, (8) Life Guard Reset, (9) Door & Indicator Controls

ACTIVITY – Label the key features of tram X257

Use the list below to correctly labels the Key Features of this tram



- (1) Rails, (2) Wheel, (3) Overhead Wire, (4) Trolley Pole, (5) Destination Sign, (6) Life Guard,
(7) Enclosed Section, (8) Foot Step, (9) Head Light, (10) Bumper Bar

Activity – Label the key features of tram W258

Use the list below to correctly labels the Key Features of this tram



- (1) Rails, (2) Truck or Bogie, (3) Overhead Wire, (4) Trolley Pole, (5) Destination Sign, (6) Life Guard,
(7) Enclosed Section, (8) Open Section, (9) Running Board, (10) Head Light, (11) Tram Driver, (12) Tram Conductor

Activity - Quick tram quiz



1. What is the colour and number of your tram?
2. What is the inside built of?
3. Where are the trams kept at night?.....
4. How is the tram powered?
5. Why is there a pole between the tram and overhead wires?
6. Why does a tram have driver's controls at both ends?
7. Early trams were pulled by horses. What would be some advantages of horse trams?
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8. What would be disadvantages?.....
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9. Does your tram have a conductor?.....
10. What does a conductor do?.....

Did you keep your eyes open on your trip?

11. What was the tallest building you saw?
12. What two bridges did you see?.....
13. Name three forms of transport you saw.....
14. What is the Information Centre made out of?
15. part of the area is called Silo Park. What is a silo and what was it used for?
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