

# Keeping Engineering Heritage Alive | Woodford Railway Museum

[This document has been edited and reformatted from Greg Stephenson's notes for ANGC 2026, the Australian Narrow Gauge Convention, Melbourne VIC. Part 4, Greg's illustrated presentation follows the text.]

## Part 1 | Background

### Introduction

"Light railway" is a generic term which covers a wide variety of railways and tramways. The term light railway implies economy of construction in one or more ways, for example: light weight rails, wooden rails, light bridges, minimal earthworks, sharp curves and steep gradients, narrow track gauge. These railways have been associated with a large range of industries, including sugar production, timber milling, construction, mining, electricity generation, tourism, water supply, gas production and explosives manufacture.

Whilst most of Australia's light railways belong to the past, there are notable exceptions. Specialised railways are still used in underground mining, and in the tourist industry. In Queensland, the sugar industry relies on a vast network of 2 ft gauge tramways. These were first built in the 1880s and have naturally evolved since that time to take advantage of technological changes.

In the mid 1970's, I purchased a copy of the first edition (1973) of "The Innisfail Tramway" by John Armstrong and G.H. Verhoeven. I came to realise that narrow gauge cane tramways were a quintessential part of the tropical North Queensland landscape. It was about this time I was trying to model Queensland Railways in HO scale but reached the final level of frustration that the only wheels and mechanisms likely to be available were old Triang "TT" and occasionally PECO underframes. The discovery that "N" gauge track, mechanisms and wheels could be used to model cane railways in HO scale set the course of my modelling interests ever since.

Prior to the development of reliable road transport and networks, Industrial Narrow Gauge Railways were the mainstay of many industries including mining, quarrying, civil contractors work and the sugar industry. Passenger carrying services were operated by some local government authorities. Small steam locomotives were used on such lines with considerable success. The development and refinement of the internal combustion engine made the installation of these new power units in

locomotives a practical possibility. Since the 1960s, the introduction of more modern and less labour-intensive transportation systems, such as conveyors, has almost entirely replaced the narrow-gauge railway in most industries. The exception is Queensland where narrow gauge cane railways continue to be used and developed.

As the end of the era of steam locomotive hauled trains rapidly approached, a group of like-minded railway enthusiasts in Brisbane started "The Australian Narrow Gauge Railway Museum Society" with the aim of preserving and operating equipment from these industrial narrow gauge railways with much of the equipment sourced from the 2 foot gauge sugar cane railways.

Development of the Woodford Railway Museum commenced in 1979 and, apart from brief periods due to the insurance crisis that affected the whole railway preservation sector and the COVID epidemic, regular open days with public train rides have been offered for nearly 4 decades. This study of the Woodford Railway Museum highlights the multitude of challenges of maintaining and keeping engineering heritage items alive using a volunteer workforce within the ever changing constraints of the regulatory, social and commercial environment.

### Prototype Background

Rather than repeat information on the various prototypes, reference will be made to general trends and observations. For more detailed background, there are a number of on-line resources, in particular:

The Light Railway Research Society of Australia Inc [<http://www.lrrsa.org.au/index.html>]

CaneSIG: The Sugar Cane Railway (Tramway) Modelling Special Interest Group: [<http://www.zelmeroz.com/canesig/>].

### Construction Tramways

Typically, these used the ubiquitous "V" skips from a range of manufactures and sizes. Often they used portable track and were man or horse worked. A few examples used small 4 wheel locomotives. This type of use finished in the late 1930's and it is unlikely that they saw much use after WW2. There are known examples where local Councils contracted the sugar mills to deliver road gravels using the cane railways.

# Keeping Engineering Heritage Alive | Woodford Railway Museum

## Timber Tramways

For climatic and other reasons Queensland had fewer timber tramways than most other Australian states. They ranged from the engagingly primitive to the well engineered Laheys' Canungra Tramway. All were closed by the end of the 1930s.

## Shire Tramways

The passenger era of the shire tramways was over by the late 1930's and many didn't survive WW2, often being sold to adjoining sugar mills. Douglas Shire Tramway lasted into 1959 hauling bagged sugar between Mossman and Port Douglas and delivering cane to Mossman Mill. This traffic was lost with the move to bulk sugar – it being road transported to Cairns – and the remnants became part of the Mossman Mill network.

For the modeler, these tramways have the advantage that they often had only two locomotives and a few passenger carriages with a handful of other rollingstock. In fact, at Ingham, the Council owned the tramway but no locomotives or rollingstock and contracted CSR to provide the services.

## Cane Tramways

It is not proposed to give detailed accounts of different mills and their locomotives, other than to say there was wide variety across the industry with many locomotives being purchased second hand and being sold or transferred between mills. Many locomotives have been rebuilt and remanufactured over their considerable life spans.

For every generalisation there are an equal number of exceptions. For example, the “G” Class Sharp Stewart tank locomotives from the North East Dundas Tramway in Tasmania were converted to tender locomotives at Isis Central Mill, whereas the Borsig tender locomotive from the Irvinebank and Stannery Hill Tramway was converted to a tank locomotive at Cattle Creek Mill.

From the perspective of selecting equipment that is appropriate to the era being modeled the following general observations are made:

- The majority of steam cane locos were 4 or 6 coupled wheel tank locos. These may have leading or trailing bogies. Most common types: 0-4-0T, 0-4-2T, 0-6-0T and 0-6-2T. Main exception was CSR which used Hudswell Clarke 0-6-0 tender loco.
- Locomotives were supplied from many parts of the world with British manufacture dominating.

German and Continental manufacturers were popular before WW1 but then fell out of favour. Only a few American locos were used. Post WW2, Australian built steam locos were more readily available.

- Most early diesel/petrol locos were small 4 wheel probably of UK origin. From 1930's, Fowler introduced 0-4-0 and 0-6-0 suitable for cane haulage on the mainlines. UK manufacturers were the main sources of 0-6-0 diesels in the early 1950's as “dieselization” commenced. Australian 0-6-0 diesel manufacturers entered market from mid-1950's and dominated the market after this time.
- Mulgrave Mill, Gordonvale was fully dieselised with 6 locomotives by 1956. However, Millaquin and Qunaba Mills, Bundaberg operated their steam locomotives up to 1979. Most mills had a transition period where steam and diesel locomotives were operated together, often with the steam locomotives on standby in case of diesel failure.
- E.M. Baldwin and Sons supplied their first bogie locomotive in 1972 which changed the face of the cane railways. In 1991, the first of the re-gauged ex QGR DH locomotives appeared which effectively ended the supply of new locomotives as virtually all “new” locomotives since that time have been re-gauged DH or NSW 73 Class locomotives.
- Remote controlled brake wagons (typically 6 wheel) began appearing in the late 1960's, but more common from the mid-1970's. Bogie brake wagons appeared in the mid 1980's from E.M.B. In the era of the re-gauged DH/73 Class locomotives, bogie brake wagons made from re-gauged ex-QGR wagons have appeared at mills that operate these locomotives.
- From the mid-1970's CSR started a program of replacing the cabs on their 0-6-0 Clyde and ComEng diesels with EMB soundproofed cabs. Other mills later followed suit with similar cabs from other suppliers.
- Manually cut whole stick cane was loaded transversely across 4 wheel wagon and held down by chains or wire rope winched tight.
- Until 1959, whole-stalk sugar cane harvesters were the only type of mechanized harvesting in Australia. The whole-stalk harvester does not handle lodged cane well; consequently the

## Keeping Engineering Heritage Alive | Woodford Railway Museum

chopper cane harvester was developed. A chopper cane harvester cuts the stems, or stalks, into billets approximately 35 cm in length. This type of harvester was commercially developed by Massey Ferguson, and by 1967 over 50 percent of the Australian cane crop was harvested by a self-propelled model. By 1978, chopper harvested cane had increased to 99.98 percent of the crop.

- In 1968, Toft's first chopper cane harvester CH200 was introduced. This machine enabled the cane to be harvested and loaded in a single operation. They also designed and built infield side tipping transporters. In 1985, Toft introduced the Series 7000, the first cane harvester to cut green cane in commercially acceptable tonnages.
- Early cane bins were typically fitted onto existing whole stalk trucks and were of relatively small capacity. Generally, they were wider than their length. Typically, they had sides that were hinged at the top to allow unloading by partial tipping to one side. They had corrugated iron floors and end walls and some had flat iron sheet sides and walls.
- Later cane bins were typically 4t, 5t or 6t capacity with mesh sides and ends. The sides were fixed to allow rotary tipping for unloading.
- By the late 1980's, large capacity (15 to 20tonne) 4 wheel bins with self-steering suspension were under development by Sugar Research Institute and NQEA. Bins to this style are in use at some mills. Victoria Mill progressively joined two 4 wheel 4 tonne bins together and removed two wheel sets. They eventually progressed to bogie 11 tonne bins and 4 wheel 10 tonne bins.

So what does this mean to a railway modeller?

Shire tramways would use steam locomotives and would need to be set prior to WW2.

Again, construction tramways are likely to have existed prior to WW2. Typical "V" skips are available in various scales from several manufacturers.

For a layout set in a period prior to 1960, cane bins would not have existed. If the period is set after the late-1970's then only cane bins would be in use. Between these two periods, both wholestick wagons and cane bins would be in use. By the late

1960's, the mix could be about 50% of each. Steam locomotives would be used to haul either wholestick wagons or small cane bins as would the smaller 0-6-0 diesel locomotives. It is unlikely that bogie diesel locomotives hauled wholestick wagons in any great quantity. "V" skips were also used by sugar mills to transport "mill mud" and for ballast work and probably lingered into the 1960's.

During the transition period, a mixture of wholestick wagons and small cane bins might appear on the one train however they would be marshalled with all the cane bins together and the wholestick wagons together. It is unlikely that the one farmer would require a mixture of wagon types. The mill may have different methods of handling the two types of loads.

## Part 2 | The Australian Narrow Gauge Railway Museum Society | Woodford Railway Museum

### The Society

The Australian Narrow Gauge Railway Museum Society was formed during 1971 and is comprised of people interested in any aspect of narrow gauge railways, whether in operation, locomotives, rolling stock, past or present, or whether they be surface railways or underground mining tramways.

The Society was incorporated during 1972 as a Non-Profit Company, Limited by Guarantee, under the Companies Act of Queensland and is now under the Australian Securities and Investment Commission.

The Society has received accreditation from the Queensland Department of Transport as a Railway Owner and Manager under the Transport Infrastructure (Rail) Act. Accreditation is now with the Office of the National Rail Safety Regulator (ONRSR).

AIMS – From the Articles of Association:

*'...all forms of rail transport regardless of ownership purpose motivation gauge and the associated equipment thereto.'*

1. To establish an operating two feet gauge passenger carrying railway using suitable steam locomotives as a "living" museum.
2. To establish a static museum of locomotives, rolling stock and other items used on narrow

## Keeping Engineering Heritage Alive | Woodford Railway Museum

*gauge railways, to complement the operating railway.*

- 3. To preserve and maintain an archive collection containing records, documents and photographs relating to narrow gauge railways.*
- 4. To encourage research into the operation, engineering or technical aspects, both past and present, of the various Shire and private narrow gauge railways and to record the results.*
- 5. To produce such publications, both audio and visual, as are conducive to these aims.*
- 6. To promote outings and excursions to places of narrow gauge railway interest.*

The operating two-foot gauge railway, staffed by volunteer members of the Society, would like to encourage the learning of manual skills fast disappearing in this age of modern technology. Skills such as blacksmithing, coach and wagon building, machine shop practice and the use of specialised hand tools would all be necessary and encouraged.

### **Museum Site**

The search for a suitable museum site was a long one. It was not until 1979 that a suitable location was found at Woodford, a township 25 kilometres west of Caboolture, on the D'Aguiar Highway. The site was originally a portion of the Caboolture to Kilcoy Branch Railway.

Development and Operation of the "Durundur Railway" in Margaret Street, Woodford commenced and a considerable amount of equipment was delivered to the site. With the advent of computer search engines, the trading name became the "Woodford Railway Museum". A one kilometre running line is available with plans for its extension in stages as the museum is developed. There is also a Station complex with platform, ticket office, crew quarters, locomotive storage shed and workshop in operation and a meeting room, disabled facilities and shower.

### **Museum and Operational Exhibits**

The society owns a collection of steam locomotives, diesel and petrol locomotives and numerous items of rolling stock. The oldest is a steam locomotive built in 1897 and the newest is a diesel locomotive, built in 1965. Currently, there are 3 operational diesel and a petrol locomotive

available for operations. Three diesel and three steam locomotives are under restoration.

As we see across many railway collections, most organisations start with a Collection rather than Conservation mindset. What is balance between too much and what is too little? Does everything need to be saved, even if it was possible? What do you do with surplus equipment or equipment that is beyond the capacity of the organisation to conserve?

With heritage equipment, this raises many issues around Operation and changes that might be required. Do you do Preservation in original condition or undertake total Restoration to return to "as new" condition.

### **Work Parties**

Work parties are held every weekend either at the Woodford site or at other locations where the Society is storing equipment or recovering material donated by interested groups. Track workdays are held on the 2<sup>nd</sup> Saturday of every month. Work continues with the restoration of steam and diesel locomotives, track extensions and the provision of buildings and other facilities on site as well as the maintenance necessary in the operation of a railway.

The Society regularly undertakes basic occupational health and safety training and everyone on site must comply with our Occupational Health and Safety policy.

The Society relies on volunteers for all roles and has no paid staff. Are all skills necessary to run the organisation and operate a railway available from volunteers? If not, can they be found at an economical cost? Will volunteers have the skills to manage other volunteers? Whilst management skills in the sector can be improving through enrolment in Certificate IV in Coordination of Volunteer Programs, this is unlikely to have a high uptake in small organisations.

Volunteering is shifting from traditional, long-term, and formal roles toward flexible, episodic, and skills-based opportunities, driven by busy lifestyles and technology. While formal volunteering has seen a long-term decline and significant disruptions post-COVID-19, demand for volunteers is rising. Future trends emphasise virtual volunteering, corporate engagement, and personalized, short-term experiences.

## Keeping Engineering Heritage Alive | Woodford Railway Museum

In the wake of COVID-19, the most significant shift has been the rise of remote volunteering, facilitated by advancements in technology and the innovation of volunteer involving organisations. This highlights the adaptability of volunteers and a willingness to embrace new modes of engagement.

Against these changing society trends, most activities do require a presence of site and many of the safety requirements are focused on long-term employees/volunteers and job specific training, especially for rail safety critical role.

Amid the current cost-of-living crisis, many people find it difficult to prioritise volunteering, or to afford the costs that can be associated with volunteering, such as transport or fuel.

Organisations are also under significant financial strain, which affects their capacity to deliver services and safely and effectively engage their volunteers. This is especially onerous where specific licensing or medical assessments apply to some roles.

### Promotion

Who is the audience? It is not railway enthusiasts and historians. Most visitors and families with children and we are competing for their discretionary expenditure in a competitive tourism environment. Maintaining staff presentation skills and overall grounds maintenance is a constant requirement. A range of electronic sources are used to promote the running days and printed handouts are used at model train shows and other heritage events.

We operate under a cyclic political system and need to continuous work to maintain relationships with all levels of government and engage with local Councilor and State and Federal Members. At the State and Federal level, the town of Woodford has moved electorates several times during boundary redistributions making continuity of representation challenging.

We now live in the world of social media and immediate “Google” responses. Whilst we maintain a Facebook page as a source of promotion, users expect immediate responses which are not always possible with volunteer organisations. Everybody with a mobile phone has a camera and probably some sort of social media account. Bad news or poor public perception travels quickly and is often hard to counter. Everybody that comes in the front gate is a

potential ambassador (good or bad) so they need to be treated with an appropriate level of respect.

### Financial

The Society raises funding for its aims through membership subscriptions; sales of books and other items of railway interest and other fund raising ventures; proceeds from public open days at the museum site and also from donations by interested parties. In-kind support such as donated materials and equipment usage is also sought.

The Society operates a special Museum Fund Account, which is used solely for the establishment and operation of the museum project. Donations of \$2 or more, either in cash or material, to this Museum Fund are an allowable Income Tax deduction.

### Public Open Days

The Society’s museum site at Margaret Street, Woodford is currently open to the general public on the 1<sup>st</sup> and 3<sup>rd</sup> Sunday of each month between 10:00am and 3:00pm.

On these days, one of the operational Society locomotives is used to give people rides along the track already constructed. The public are also encouraged to view progress of the project and to ask questions of members present.

### Concluding Comment

The Society has confronted many challenges in its 45 years of operations and continues to adapt to constantly changing regulatory, insurance, and customer expectations. A behind the scenes look at the Woodford Railway Museum gives an insight into the effort required to keep narrow gauge heritage alive. There’s much more to running a heritage railway than finding someone to pull the whistle cord.

## Part 3 | CULMS404A – Contribute to the Preservation of Objects | Woodford Railway Museum

### Historical Context

The museum site/station complex is located on part of the former QGR 3’ 6” gauge branch railway from Caboolture to Kilcoy. The actual station complex is on part of the turning triangle of the original Woodford station which was located on the opposite side of Margaret Street. The area of the original station is now parkland and private

## Keeping Engineering Heritage Alive | Woodford Railway Museum

property. The area of the site described as “The Compound” was the original dead-end leg of the triangle.

When the Society took possession of the site, all railway infrastructure had been removed with the exception of some earthworks and the area planted with exotic pine species. No buildings were present on site. There has been some change to the earthworks within the station area – most noticeable being the widening and lowering of “The Compound” and alteration of the location of the original QGR mainline. It could be argued that the Society has set about to establish a “caricature” of a railway as all buildings have been established by the Society.

The majority of the railway equipment owned by the Society was from industrial rather than common-carrier or passenger railways. Therefore, the equipment’s conversion and use in hauling passengers for demonstration purposes is a commercial rather than “historical” imperative. The majority of the equipment was sourced from the sugar industry with smaller amounts from mining activities and a municipal sewage works. Whilst sugar was grown experimentally around Morayfield in the mid 1800’s, there is no sugar growing or mining activity associated with Woodford. The Museum therefore has to establish its own reason d’etre – other than it was the only available land close to Brisbane that could be obtained in the late 1970’s.

### Overall Complex

The complex can be broadly broken into two areas; those accessible for general public access and those restricted to Society use. There is an internal fence to mark this demarcation of uses. The public areas include the car park, picnic area and station complex whilst the remaining areas are for restricted access and include the workshop, open storage areas and worker’s facilities. It is noted that all buildings have been established on-site since it has been occupied by the Society. Many have been relocated and were sourced from various QGR locations. However, they have no particular significance to industrial narrow gauge railway. Most buildings have been adapted and altered from their original conditions. For the sake of convenience each of the major buildings will be discussed individually.

### Former QGR Northgate First Aid Room

This was the first building established on-site and originally served as the ticket office and sales area. It has been refurbished for use as a display area and currently houses an assortment of historical artefacts.

### Former QGR D’Aguilar Station

Consists of two Ladies toilets, an office and ticket office with sales area. The office is nominally for use by the station master. However, it has many functions including record storage for items required by the Operation’s Manual to be on-site, crew tea making facilities, general store for hand towels, toilet paper, soft drinks, sales items etc, and “secure” storage area. The ticket office occupies the remainder of the building. Whilst focussing on sales items, some items are for display only. Some genuine artefacts, such as Railway Crossing signs, are offered for sale.

### Former QGR Wamuran Station

Consists of two men’s toilets, a disabled access toilet and display room (4.5 m x 3.0 m). The display room is lined internally with windows in two walls and the door in the other. The fourth wall of tongue and groove construction forms the partition wall with the disabled access toilet. Lighting in the display room consists of 2 banks of three spot lights. Around three walls are moveable panels covered in carpet to which a range of photographs is attached showing Society activities and some industrial railway activities. These display boards form the Society’s publicity stand and are regularly removed and the displays altered depending on who last erected the stands. There is a small display case housing two small dioramas and some small artefacts.

These three buildings form the main public access areas. The buildings are of timber construction, lined internally and have corrugated iron roofs. They have timber floors and are situated on concrete stumps clear of the ground. All these buildings are accessed from a concrete surfaced platform at or near the building floor level - each room is accessed directly from the platform. All buildings are examples of adaptive re-use of QGR buildings.

### Workshop – Former QGR Northgate Compressor Shed

This building is not generally accessible by the public with fencing to act as the demarcation of

## Keeping Engineering Heritage Alive | Woodford Railway Museum

public areas. This is a timber framed, iron clad building used for maintenance and repairs of equipment and includes a 2½ tonne capacity overhead crane for lifting activities. Because of its small size and its storage function, the use as a workshop for heavy mechanical repairs is limited. Its use for “delicate” conservation activities could not be contemplated. A steel framed annex was added to the side of the original timber building in 2023.

### BLC Wagon Body

One of the first secure storage areas installed was an ex-QGR BLC steel wagon body bolted onto a concrete slab. It was located adjacent to the (future) workshop. One half was allocated to the trackwork gang and the other half to loco parts storage. Due to age and rusting, the roof began to leak. Due to its poor condition, it was demolished in 2021 in preparation for an extension of the workshop to provide a machine shop facility.

### Locomotive Storage Shed

This bespoke steel frame building with steel sheet cladding was erected in 2017 to provide undercover, secure storage for operating locomotives and those undergoing restoration. It contains 3 railway tracks set flush into the concrete floor.

### QCWA Cottage

A small cottage was obtained from the Woodford Branch of the QCWA and is used as member's facilities. It contains kitchen, toilet, shower, messing facility and a room for overnight accommodation. There is a small meeting room which doubles as a library with most books and journals being stored in boxes. This is a timber framed and clad building with iron roof and steel stumps with the floor approximately 1 metre above ground level. This building is not available to the general public.

### Garden Sheds

Behind the cottage are a series of garden sheds used as storage. These are typical light gauge steel structures set on concrete slabs. They were constructed with a recess around the edge of the slab for the walls to sit on so that the internal floor is about 15mm above the bottom of the wall so that it remains dry. The first is used as a carpenter's store and larger one designated as a parts / artefact store with the intention that items stored off site could be transported to site. In fact,

it became a mower and grounds maintenance store. Given the light weight construction, security remains an issue. They are very hot inside during summer.

### Open Storage

Apart from the locomotive storage shed, there is very little undercover storage on the site, so most items are stored in the open including the operational equipment. There is an extensive collection of equipment however it is deteriorating due to open storage. Given the surrounding trees – many on adjoining properties – most surfaces collect leaf litter which becomes mulch adding to the deterioration of the items. Open storage currently presents the single most detrimental impact on the collection.

### General First Impression

The public picnic facilities and the bush land setting are quite pleasant but present a number of conservation issues. The station facilities are very good when compared to a number of railway preservation groups. The main thing that ANGRMS is offering is an inexpensive ride behind a heritage loco in a pleasant bush setting. For this purpose, it does a good job however as far as conservation and preservation of the bulk of the items are concerned, this remains a future challenge. For the casual visitor, most of the loco collection is off limits whereas the equipment stored in close proximity to the public areas where it can be easily seen is undergoing cosmetic overhaul.

ANGRMS is an under-funded and under-resourced organisation for the size of the task that it has set itself. Efforts to date have concentrated on establishing an operating railway and the provision of basic public facilities however little appears to have been undertaken in what could be loosely termed “museum activities”.

### Suggested Published Sources

Whilst there are many books published on the history of sugar mills and the towns where they were located, many of these only touch on the sugar tramways in passing. Some books that have a specific focus on the tramway aspects are listed.

*The Mapleton Tramway – The Line of the Diminutive Shay Locomotives* by John Knowles, Self published, Brisbane 2004.

*The Innisfail Tramway – The History and Development of the Geraldton Shire Tramway*

## Keeping Engineering Heritage Alive | Woodford Railway Museum

*and the Mourilyan Harbour Tramway* by John Armstrong and G. H. Verhoeven, LRRSA, Melbourne 2000. 2<sup>nd</sup> Edition.

*Cane Train – The Sugar-cane Railways of Fiji* by Peter Dyer and Peter Hodge, NZRLS, Wellington 1988.

*Built by Baldwin – The Story of E.M. Baldwin & Sons, Castle Hill, New South Wales* by Craig Wilson, LRRSA, Melbourne 2002.

*Built by BUNDABERG FOUNDRY* by John Browning and Brian Webber, ANGRMS, Woodford, 2012.

*Salute to the Hudswells – The story of the Colonial Sugar Refining Company's Hudswell Clarke locomotives in Queensland and Fiji* by Ian Stocks, David Mewes and John Browning, ANGRMS, Woodford, 2014.

*Tall timber and tramlines Queensland* by John Kerr, LRRSA, Melbourne, 2009.

*Laheys' Canungra Tramway (Third Edition)*, by Robert K. Morgan, revised by Frank Stamford, LRRSA, Melbourne, 2022.

*The Railways of Caboolture, Woodford and Kilcoy* by Brian Webber, ANGRMS, Woodford, 2009.

## Part 4 | The Presentation

# Keeping Engineering Heritage Alive

## Woodford Railway Museum

Greg Stephenson



- Historical Context
- The Australian Narrow Gauge Railway Museum Society
- Woodford Railway Museum (Durundur Railway)
- Recent Projects
- Challenges For The Future

# Light Railways



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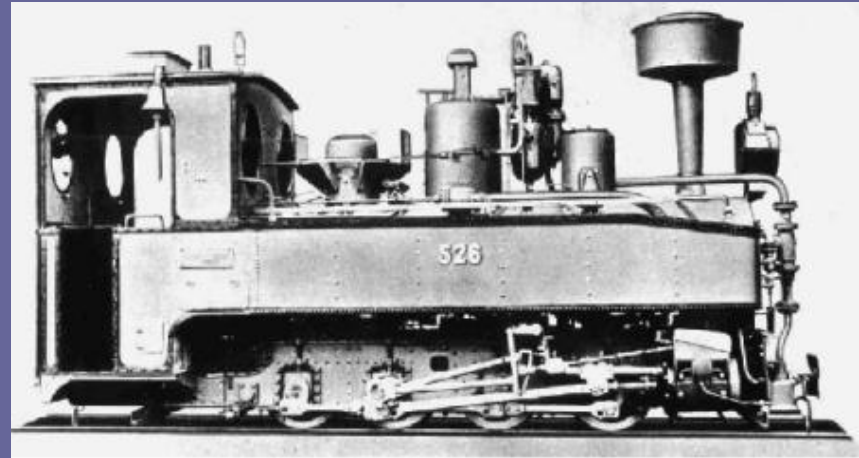
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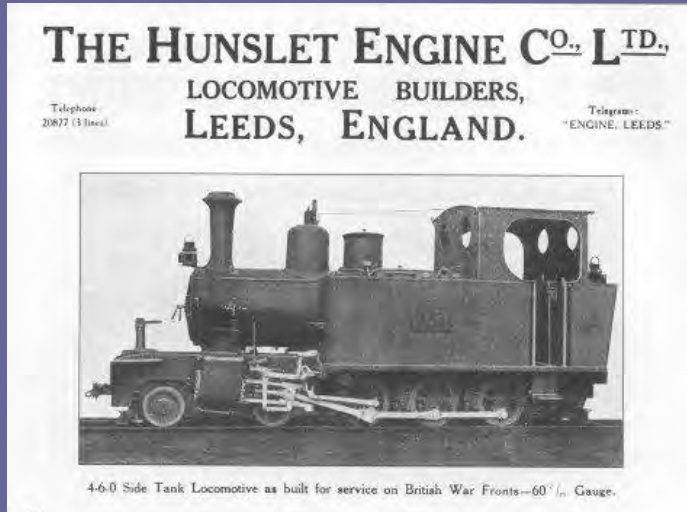
# World War 1



France



Germany



United Kingdom



United States of America

# In Queensland

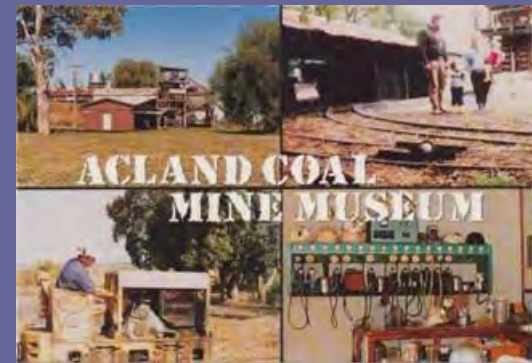
- Only the Government owned Railways
- Everybody else had Tramways!



# Civil Construction



# Mining





# Shire Owned Tramways

- Buderim Tramway (2' 6" gauge)
- Mapleton Tramway (2' gauge)
- Lucinda – Stone River (Ingham) (2' gauge)
- Geraldton (Innisfail Tramway) (2' gauge)
- Mossman - Port Douglas (2' gauge)



Beaudesert Shire Tramway, Belmont Shire Tramway, Aramac Shire Tramway, Proserpine Tramway, Ayr Tramway, Cairns Mulgrave Tramway

# Innisfail Tramway (QGR 2' Gauge)



# Timber Tramways

- Lahey's Canungra (3' 6" gauge)
- Neranwood Tramway (2' gauge)
- Munro's Hampton (2' 6" gauge)
- Fraser Island
- Cooloola Tramway
- Bunya Mountains - Lars Andersen



The tramway worked on gravity ... as logs rolled down the tracks, an empty carriage was pulled back to the summit



# The Sugar Industry

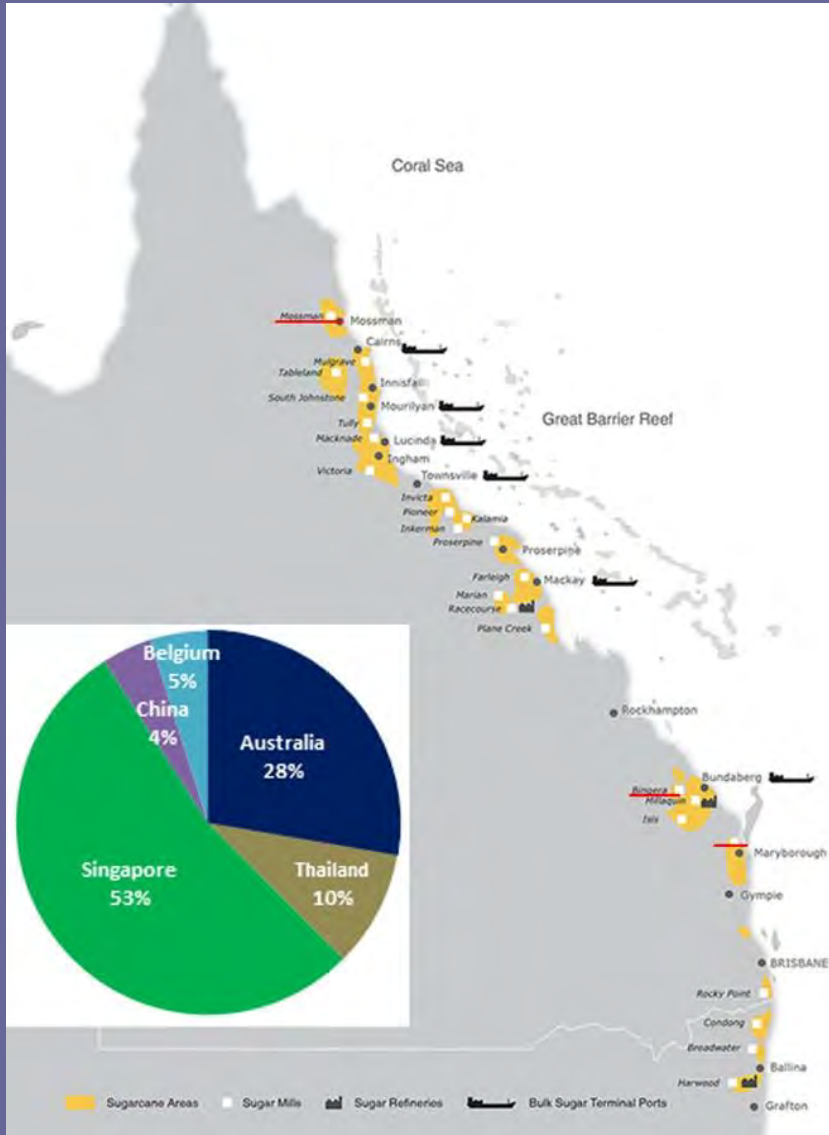
Queensland's sugar industry produces 95% of Australia's sugar cane, worth almost \$4 billion dollars to the state's economy (Australian Sugar Milling Council; Canegrowers 2025).

The remainder is grown in Northern New South Wales.

Queensland's cane crushing season occurs annually from early June to late November/early December

1961 – 5.3% Mechanically Harvested

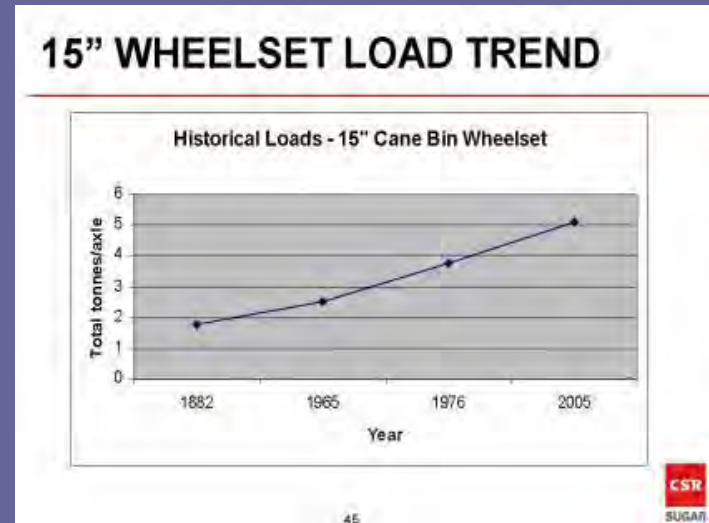
1974 – 98.5% Mechanically Harvested



# Sugar Industry Changes

- 1961 – 5.3% Mechanically Harvested
- 44,810 Cane Trucks
- 1974 – 98.5% Mechanically Harvested
- Approx. 50,000 Cane Trucks

## Historical Trends



## CSR Current Fleet – 7 Queensland Mills

Bin Size	Typical Build Cost	No. of Bins
4 tonne	\$4,500	10,835
5 tonne	\$4,500	4,098
6 tonne	\$4,700	4,809
11 tonne	\$13,500	399
<b>Total</b>		<b>20,141</b>

Source: Robert Johnson & Lino Santarossa, 'Way Forward' for Rolling Stock in the Sugar Industry

# Harvesting Cane – Hand Cutting



Hand cutting of burnt sugar cane



Portable tramway rail



Loading cane trucks in the canefield



Returning cane trucks to tramway

# Harvesting – Mechanical Cutting



Loading directly into cane bins on truck



Transfer from truck to tramway



Loading "haul out" in the canefield



Transfer the cane to cane bins

# Sugar Tramways / Cane Railways

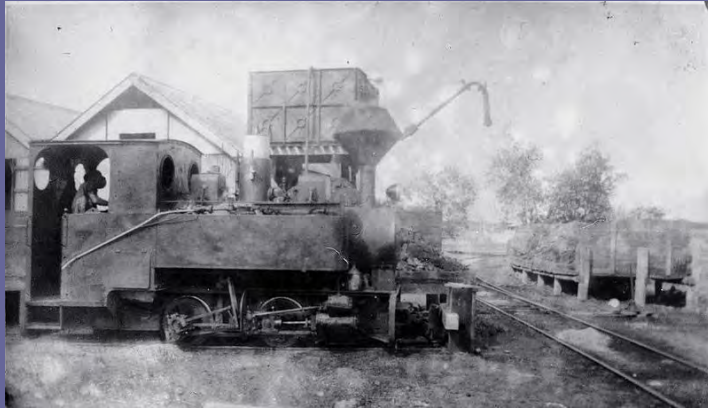


FIG. 4. 0-4-2 TANK LOCO. FOR QUEENSLAND 2 1/2 FT. GAUGE



# Sugar Tramways / Cane Railways



# Sugar Tramways / Cane Railways



# Sugar Tramways / Cane Railways



# Sugar Tramways / Cane Railways Passenger Services

MALDEN — PHONE 7 CORNHUUS.

## MAROCHYDORE—EASTER HOLIDAYS.

**THE TRAM** will leave Currie Street, connecting with Evans' Motor Boats at Deepwater, as follows:

SUNDAY, APRIL 5th . . . . 8.35 a.m. and 3 p.m.  
MONDAY, APRIL 6th . . . . 8.35 a.m. and 3 p.m.

The boat will leave Marochydore at 1.15 p.m. to connect with the Tram.

Nambour,  
March 19th, 1931.

GEO. GREATHREAD,  
General Manager.

## COOLUM BEACH—EASTER HOLIDAYS.

**THE TRAM** will leave Currie Street as follows:

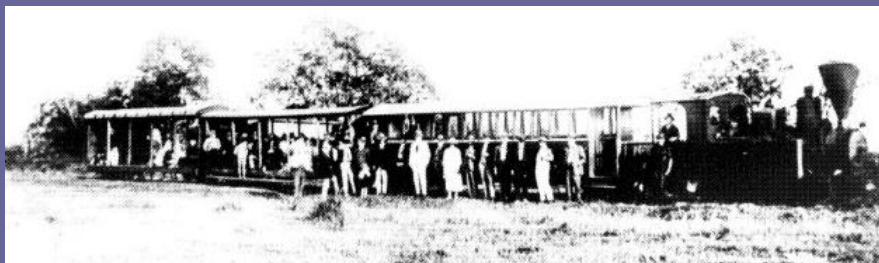
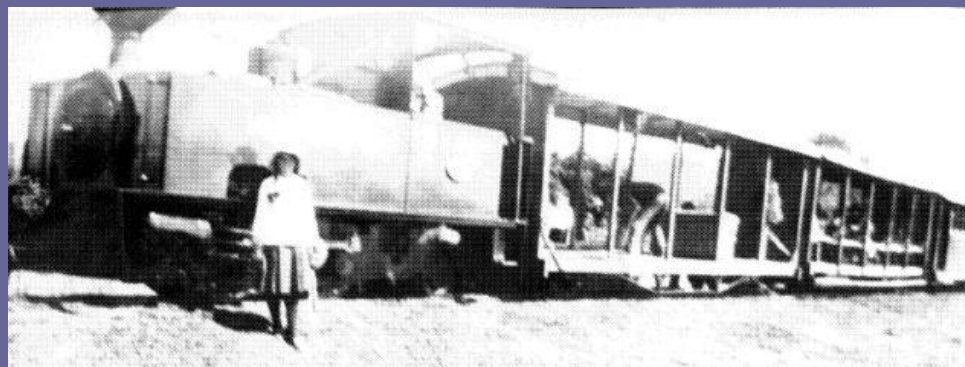
WEDNESDAY, APRIL 1st . . . 12.15 p.m.  
THURSDAY, APRIL 2nd . . . 12.15 p.m.; 10 p.m.  
FRIDAY, APRIL 3rd . . . . 8.35 a.m.  
SATURDAY, APRIL 4th . . . 8.35 a.m.  
SUNDAY, APRIL 5th . . . . 8.35 a.m.; 12.30 p.m.  
MONDAY, APRIL 6th . . . . 8.35 a.m.

The Tram will leave Coolum at 4 p.m. on all holidays; other days at 3 p.m.

Nambour,  
March 19th, 1931.

GEO. GREATHREAD,  
General Manager.

**NAMBOUR-COOLUM TRAMWAY.**  
Tram leaves Nambour Wednesdays at 12.45 p.m. and leaves Coolum at 3.30 p.m.  
Tram leaves Nambour Saturdays at 4.45 a.m. and 12.45 p.m., and leaves Coolum on return at 7.0 a.m. and 3.30 p.m.  
Tram leaves Nambour Sundays at 9.0 a.m., and leaves Coolum on return at 4.0 p.m. Fares, 2s. each way, Children Half-price.  
The Commissioner for Railways is not responsible for the running of Trams on the Coolum tramway.



Most mills had infrequent "picnic" trams

## MAROCHYDORE TRAMWAY.

Tram leaves Nambour at 12.0 noon, Tuesdays and Thursdays; 2.0 p.m., Saturdays; and 8.30 a.m., Sundays; connecting with Motor Boat at Deepwater for Marochydore. Returning by Motor Boat from Marochydore to Deepwater; thence by Tram reaching Nambour at 3.0 p.m. on Tuesdays and Thursdays, 4.0 p.m. on Saturdays, and 5.30 p.m. on Sundays. Fares 2s. 6d. each way.

The Commissioner for Railways is not responsible for the running of Trams on the Mapleton or Marochydore Tramway.

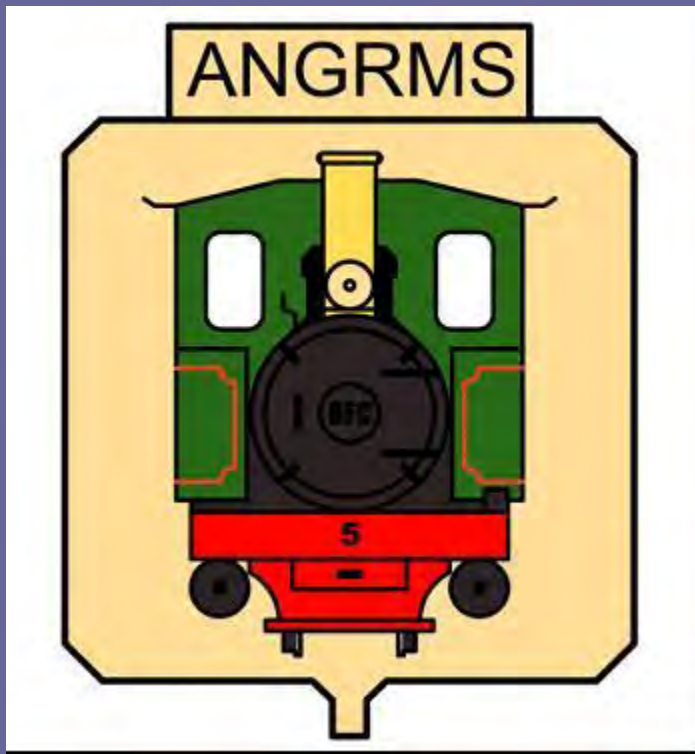
# Sugar Tramways / Cane Railways

## Tourist Ventures



# THE AUSTRALIAN NARROW GAUGE RAILWAY MUSEUM SOCIETY

ABN: - 92 009 872 011



## WOODFORD RAILWAY MUSEUM

Margaret Street, Woodford

Web: - [www.angrms.org.au](http://www.angrms.org.au)

P.O. Box 1135, Woodford, Qld, 4514.



# Setting Up The Society

## Legal Status

- **Public Meeting - Thursday 28th January 1971**
- **First General Meeting - 25th February 1971**
- **Management / Executive**
- **Non-Profit Company Limited by Guarantee**
  - **Queensland Companies Act**
  - **Australian Securities and Investment Commission**
  - **Company Reports, Accounts, Auditing**
- **Taxation, Donations, GST**



# PRIVATE & INDUSTRIAL RAILWAYS

- ‘...all forms of rail transport regardless of ownership purpose motivation gauge and the associated equipment thereto.’

## OBJECTS OF THE SOCIETY

- Conduct meetings, conventions etc
- **To acquire items of historical significance**
- To encourage study
- Compilation of authentic records
- Publications – books etc
- Publications – auditory and visual records
- Arrange tours, excursions etc
- Promote social intercourse



# DURUNDUR RAILWAY

## Land Acquisition

- **Caboolture – Woodford Railway**
  - Opened 6<sup>th</sup> December 1909
  - Extended to Kilcoy in 1913
  - Wamuran to Kilcoy Closed in 1964 and Land Sold
- **ANGRMS - Woodford (1979)**
- **Freehold, Leases, Easements & Council Owned Land**
- **Town Planning Approval and Conditions**
- **Subdivision Approvals**
- **Building Approvals**
- **Rates, Charges and Maintenance**



# PRIVATE & INDUSTRIAL RAILWAYS

## The Collection

- ACCREDITED LOCOMOTIVES
  - 2 Steam
  - 4 Diesel
  - 1 Petrol
  - 1 Hand Pumper Trolley
  - 1 Petrol Power Trolley
- 4 PASSENGER VEHICLES
- 22 WORK WAGONS
- Extensive Collection Awaiting Restoration
  - Oldest Steam Locomotive Built in 1897
  - Newest Diesel Built in 1965





# WOODFORD RAILWAY

## Finances - “Asset Rich & Resource Poor”

- Operating expenses met from train operations
- Limited surplus for restoration
- Need Grants, Donations, In-kind Support
- Strong Competition for Grant Funds
- Applications becoming more complex
- Museum Operating Funds for 2024
- Excluding Provisions for Depreciation  
Expenditure approx \$35,000
  - Insurances 12%
  - Rollingstock, Buildings 38%
  - Utilities 9%
  - Bank Fees 2%
  - Paid Advertising 1%



# WOODFORD RAILWAY

## Early Operations – Woodford





# WOODFORD RAILWAY

## On-going Developments





# WOODFORD RAILWAY

## Volunteers

- Almost total reliance on volunteers
- Are all skills necessary to run the organisation and operate a railway available from volunteers?
- Motivating of volunteers
- Volunteers need to be organised, work needs to be planned and resources available
- Build teams – can be good and bad





# WOODFORD RAILWAY

## Workplace Health and Safety

- Amusement Device (Original)
- Registered Workplace – Volunteers are “Workers”
- Steam Locomotive Boilers are Classified Plant
- “Ticketed Operators”
- Noisy, Dirty, Physically Demanding, Paints, Chemicals, High Temperatures and Pressures



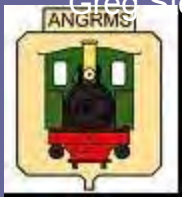


# WOODFORD RAILWAY

## Rail Safety Accreditation

- Railway Owner and Railway Operator
- Department of Transport - Reporting & Audit
- National Rail Safety Bill => ONRSR
- Formalise Operations Manual
- Evidence of Compliance with Manual
- Record Keeping
- Independent Boiler Inspector / Track Inspector
- Emergency Planning & Training





# WOODFORD RAILWAY

## Movable Cultural Heritage

### Protection of Movable Cultural Heritage Act 1986

- Protects Australia's movable objects of cultural significance
- Need permission to be exported
- Applied science or technology, including heritage machinery

### Objects refused an export permit

- Fowler Tank Steam Locomotive, ca 1898 builder's number 7607
- Decauville narrow gauge steam locomotive
- Moore Road Machinery diesel locomotive GT-122-DH-1, c1956

National Cultural Heritage Account helps Australian public cultural organisations buy significant objects that they could not otherwise afford.



**What happens if you already own a movable object of cultural significance?**



# WOODFORD RAILWAY

## Track Standards

- Gauge – 2 feet (610mm) – 6 ton Axle Loads
- Part worn rail used in “as in” condition
  - Main lines 60 lb/yd (Various)
  - Sidings – passenger traffic 41 $\frac{1}{4}$  & 42 lb/yd
  - Sidings – no locomotive access 20 lb/yd





# WOODFORD RAILWAY

## Track Standards - Pointwork

- **Wheel Standards (Various) – Flangeways**
  - 32mm ( $1\frac{1}{4}$ " ) ex CSR Sugar Mills
  - 38mm ( $1\frac{1}{2}$ " ) Other Sugar Mills
  - 45mm ( $1\frac{3}{4}$ " ) ex QGR Components
  - **Compromise 32mm Check Rails & 45mm Thro' Frog**

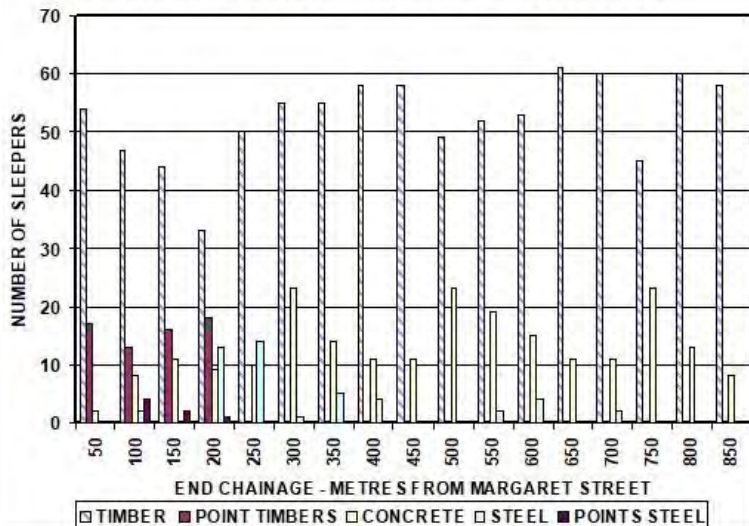




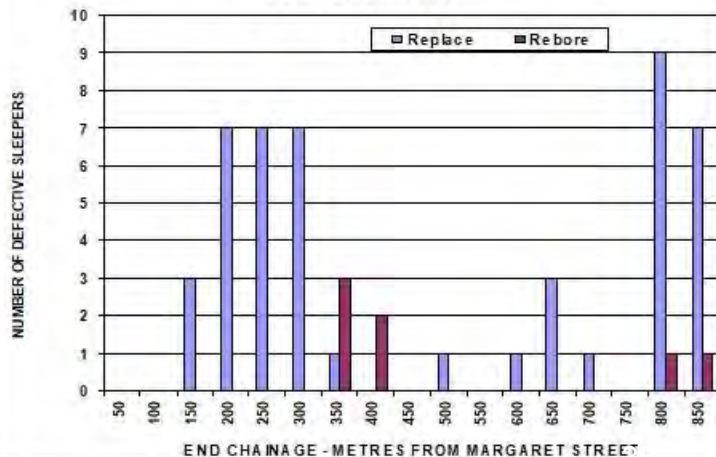
# WOODFORD RAILWAY

## Mainline Upgrade Project – From 2012

WOODFORD RAILWAY MAINLINE SLEEPERS - 2016



WOODFORD RAILWAY MAINLINE SLEEPERS - DECEMBER 2017





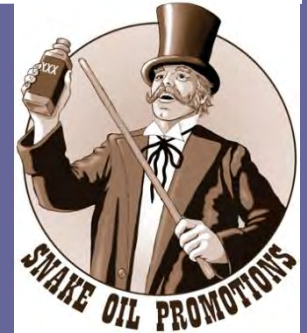
# WOODFORD RAILWAY MUSEUM

## Sleeper Recovery - Victoria Mill - 2013

### Have We Got A Deal For You!

- Pay your own travel costs
- Pay your own accommodation
- Pay for your meals
- Provide your high visibility clothes and boots
- Work like a "navvie" in tropical North Qld
- Take holidays
- And do it for free!!

- 8 of us excepted
- Aged from 18 to 78





# WOODFORD RAILWAY MUSEUM

## Sorting Them Out





# WOODFORD RAILWAY MUSEUM

## Checking Them Out



Daniel Dwyer & Nathan Davey (2016), Queensland University of Technology (QUT)  
Thesis - *Remaining Strength In Aged Prestressed Concrete Railway Sleepers.*

Awin Philip (2025), Queensland University of Technology (QUT)  
Thesis Report – *Performance Evaluation of Prestressed Concrete Sleepers*

The sleepers were still in good condition after 60+ years of service life and suitable for service at the design loads of 6 ton axle loads and train speeds below 20km/hr.



# WOODFORD RAILWAY MUSEUM

## Locomotive Storage Shed - 2017





# WOODFORD RAILWAY MUSEUM

## Peterson Rd – “COVID Junction” - 2020





# WOODFORD RAILWAY MUSEUM

## Cert. II – Rail Infrastructure – 2022 & 2023



“Tracking For Queensland” - Skilling Queenslanders for Work.  
Project run by Movement TwentyTwo Inc  
Registered Training Organisation (RTO) - CERT Training





# WOODFORD RAILWAY MUSEUM

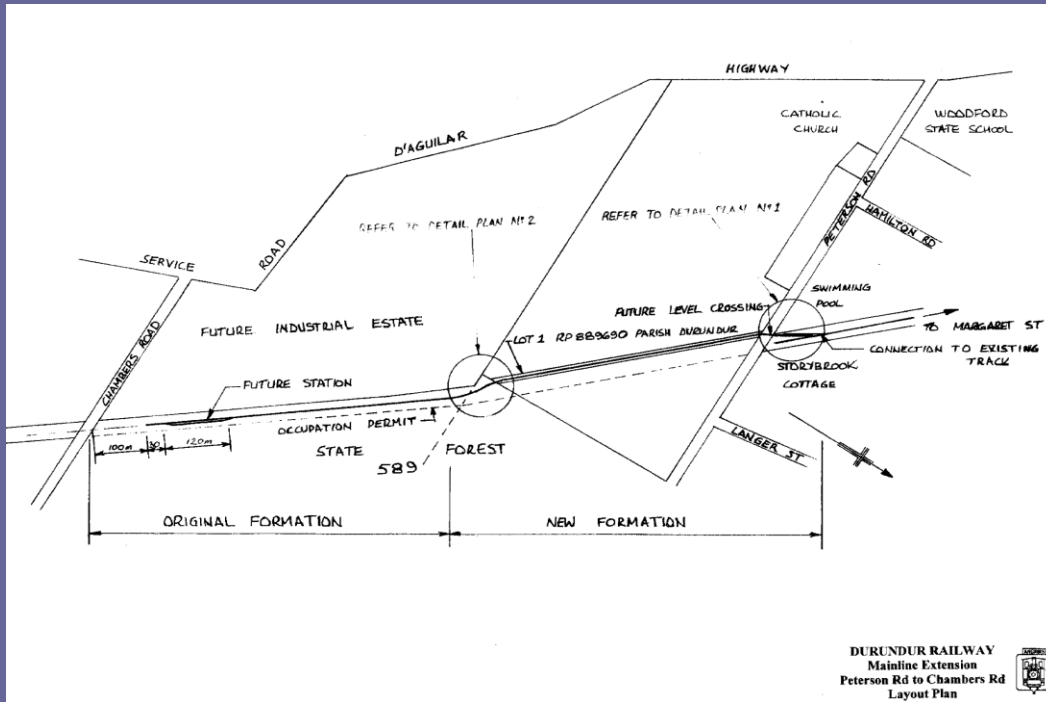
## Peterson Road Station Platform - 2024





# WOODFORD RAILWAY

## The Future – Peterson to Chambers Rds





# WOODFORD RAILWAY

## The Future

- **Management of**
  - ANGRMS (Corporate Identity)
  - Finances & Fundraising
  - Collection
  - Volunteers
  - Government Relationships
- **Maintain Society's Assets**
  - Infrastructure (Buildings, Track)
  - Preserving Collection
  - Research Collection
  - Acquisitions & Disposals
- **Promote ANGRMS**
  - Social Media
  - Communicate & Explain Efficiently
- **Rail Safety Legislation**
  - Health Standards
  - Training
- **Attract & Retain Volunteers**
- **Have Fun!**





# WOODFORD RAILWAY

## Operations

- Margaret Street,  
Woodford
- 1<sup>st</sup> and 3<sup>rd</sup> Sundays  
Each Month
- 10.00am to 3.00pm
- ALL WELCOME!!



