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LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



Light Railway Research Society of Australia Inc.



Editor: Richard Warwick
PO Box 21, Surrey Hills Vic 3127
editor@lrrsa.org.au

Associate Editors: Mike McCarthy,
Frank Stamford and Phil Rickard

Field Reports Editor: Peter Evans
fieldreports@lrrsa.org.au

Industrial Railway News Editor:
Chris Hart
industrial@lrrsa.org.au

Research Editor: Stuart Thyer
research@lrrsa.org.au

Heritage & Tourist Editor:
Andrew Webster
heritagetourist@lrrsa.org.au

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COUNCIL

President: Bill Hanks (03) 5944 3839
Secretary: Phil Rickard (03) 9870 2285

New South Wales Division

c/o PO Box 674 St Ives NSW 2075
President: Jeff Moonie (02) 4753 6302
Secretary: Ross Mainwaring 0415 995 304

South Australian Group

9 Craiglee Dr, Coromandel Valley SA 5051
Secretary: Les Howard (08) 8278 3082

South-east Queensland Group

365 Fairfield Rd, Yeronga Qld 4104
Secretary: Bob Gough (07) 3848 3769

Tasmanian Representative

11 Ruthwell St, Montrose, Tasmania 7010
Ken Milbourne (03) 6272 2823

SUBSCRIPTIONS

Contact the Membership Officer,
PO Box 21, Surrey Hills, Vic 3127;
e-mail: subscriptions@lrrsa.org.au
internet: www.lrrsa.org.au
or use the coupon on page 38.

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Imperial to metric conversions:

1 inch (in)	25.40 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metres
1 mile	1.60 kilometres
1 ton	1.01 tonnes
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts
1 gallon	4.536 litres
1 cubic yard	0.765 cubic metres
1 super foot	0.00236 cubic metre
(sawn timber)	

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Editorial

As the year 2020 ends, it is worth reviewing what has been achieved. It goes without saying that the year 2020 has been one of the toughest in living memory that has affected us all in Australia, and those of us in Victoria in particular. Amongst all the hardships, the LRRSA has been able to continue almost unaffected thanks to all of our volunteers and the fact that our printer and Australia Post who have both continued to operate throughout the lock downs.

During the year we have published three books, *Rails to Rubicon* (reprint), *Beneath the peak of Lyell*, and *In the shadow of the Prom* and these have all been well received by our readers and are selling well. There are more books in the pipeline, and some are in an advanced state and will be published in 2021.

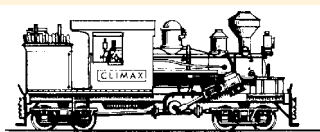
Due to all of the Covid 19 restrictions we have started to use Zoom to have all Council meetings as well as entertainment meetings and the Annual General Meeting in October – these have been very successful and will be continued to be used.

In February 2021 the LRRSA turns 60 and we will mark the milestone in some form during the year.

I trust you enjoy this edition of the magazine and as you will see, there is some excellent material for you to enjoy.

On behalf of the LRRSA Council and the editorial team I would like to wish all of our members and readers a very Merry Christmas and wish you all the very best for 2021 – let's hope it is a better year than 2020. . . *Richard Warwick*

Front Cover: Leaving Howells loop on the Farleigh north coast line on the afternoon of 11 July 2020, 94 class Netherdale heads south with 103 loaded 6-tonne bins and BVAN8. The locomotive is an ex-NSWGR standard gauge 73 class diesel-hydraulic. Photo: Steven Jesser



**Light Railway Research Society
of Australia Inc. A14384U**
PO Box 21 Surrey Hills Vic 3127
www.lrrsa.org.au

The Light Railway Research Society of Australia Inc. was formed in 1961 and caters for those interested in all facets of industrial, private, tourist and narrow gauge railways in this country and its offshore territories, past and present.

Members are actively involved in researching light railways in libraries and archives, interviewing knowledgeable first-hand participants and undertaking field work at industrial sites and in forests.

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Articles, letters and photographs of historical and current interest are welcome. Contributions should be double spaced if typed or written. Electronic formats accepted in the common standards.

Material is accepted for publication in *Light Railways* on the proviso that the Society has the right to reprint, with acknowledgement, any material published in *Light Railways*, or include this material in other Society publications.

The Luggage Point Tramway, Brisbane – Part 1

by John Browning

This article is about a 2 ft gauge electric tramway built from 1914 to assist in the construction of Brisbane's main sewer and the sewage treatment works at Luggage Point, near the mouth of the Brisbane River. After most of the line was lifted in 1929, its remnants continued in use at the treatment works for many years afterwards. A variety of records of the Metropolitan Water & Sewerage Board have survived and there was also a Royal Commission conducted in 1921 by Mr C E Oliver as a result of many difficulties and delays in the construction of the sewer. These records provide much information about the construction tramway although there are also many frustrating gaps.

Today, the area has greatly changed as a result of reclamation, river and drainage works, wartime storage depots, and industrial and airport development. The once rural nature of the area has gone forever. The original sewer has long since been replaced and the treatment works has been rebuilt several times. There are few traces left of the roadside tramway.

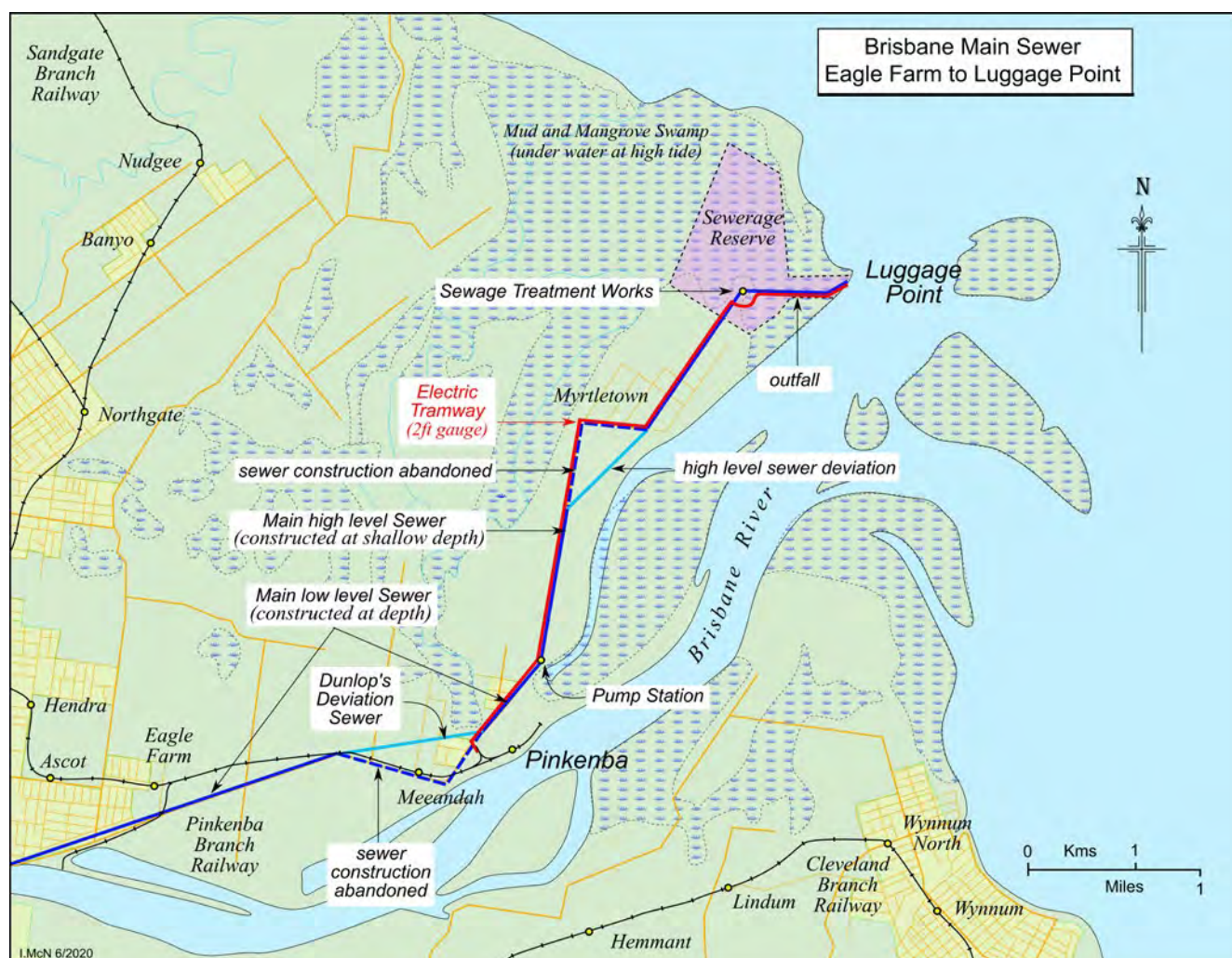
It is often erroneously claimed that the high-profile former Brisbane City Council Lord Mayor Clem Jones was responsible for the sewerage of Brisbane. This is not true, because a reticulated sewerage system was being constructed during the First World War era, with Clem Jones' reign occurring only in the final years of the task that extended

into the 1970s. Alas, Clem Jones was destined to be the mayor who presided over the tragic decision to close the city's once extensive electric street tramways in 1969.

Background

As had occurred in other Australian capital city areas, a unitary authority with responsibility for water supply and sewerage disposal across a plethora of local councils was necessary in Brisbane. As a result, the State Government established the Metropolitan Water & Sewerage Board (MW&SB) in December 1909, under an appointed President, Ernest James Theodore Manchester, a Melbourne water engineer. The Board also had eight elected members, drawn from across the various local government areas. In early 1916, the Board's name was changed to the Metropolitan Water Supply & Sewerage Board (MWS&SB). The Brisbane City Council was formed in 1924 as an amalgamation of twenty local authorities – two cities, six towns, and twelve shire councils. The City Council took over the Board's responsibilities on 1 April 1928.

The outline of a proposed sewerage scheme for Brisbane was developed in 1911, designed by Gordon Thom, the newly-appointed Sewerage & Drainage Engineer.¹ It involved a main sewer running from Toowong, south west of the city centre, to Eagle Farm to the city's north east, with a series of branch sewers connecting into it. From Eagle Farm the main sewer would extend further to the north east to a treatment works to be established near the mouth of the Brisbane River at Luggage Point, a desolate and swampy area on the northern bank subject to tidal inundation. The underground sewer



would be a low-level one, meaning that gravitation would bring the sewage right down to Luggage Point where it would be at a depth of almost 50 feet below mean sea level. Here there would be a pump shaft where the sewage would be raised to above ground level for treatment. An outfall sewer would lead from the treatment works to the shoreline at the river's mouth.

The planned route of the main sewer from the city coincided with road reserves. This was for ease of access during construction and to avoid the need to acquire rights over private land, but it meant that the route was not always direct, and when unexpected construction difficulties occurred, they had an adverse effect on the roadways concerned.

In those days, the proposed treatment works site at Luggage Point was a long way from the urban area, about four miles beyond the railway terminus of Pinkenba where there was not much more than a hotel, store, school and railway station by a wharf, then surrounded by mangroves and empty river flats. The gazetted roads beyond Pinkenba were largely unformed and land in this area, known as Myrtletown, was used for farming and market gardens.

Planning a light railway

The section of sewer from Esker Street, Pinkenba, through Myrtletown to Luggage Point was to be covered by Contract No.6.² Because of the lack of all-weather roadways the MW&SB Engineer for Sewerage decided that the specification for the construction of this section of deep level sewer, and the outfall at the river mouth beyond the treatment works, should include a temporary 2 ft gauge light railway, 4¾ miles in length, to transport materials and to provide access to the excavation shaft sites and other construction areas.

The route of this section of the sewer and its associated tramway would commence on Myrtletown Road near Pinkenba State School at the junction with Esker Street, where Shaft 39 would be situated,[§] and continue on Myrtletown Road before turning right at John (now Brownlee) Street, at a location that is now within the perimeter of Brisbane Airport. It would turn left out of John Street into Beach Road and continue to the pump shaft near the site of the Luggage Point treatment works, with the tramway continuing from there along the course of the proposed outfall sewer, with a branch to a wharf.

The line would be powered by electric traction, with the power supply for the overhead wire coming from a temporary power house to be constructed at John Street, Myrtletown.³ The future treatment works site itself was not suitable as the location of the temporary power house because it was subject to tidal flooding and would require building up before the treatment works could be constructed.

Electricity from the power house would provide current for the electric haulage gear and cranes used for the excavation of shafts and tunnels. It was the reticulation of this power along the route of the sewer that favoured the use of electric traction on the railway, and most likely made it the most cost-efficient haulage solution for the many thousands of tons of fill that were required to build up the site of the treatment works and the route of the outfall sewer beyond.

A temporary wharf would allow fuel and building materials for the project to be brought in by water transport. The site of this wharf is assumed to have been on the riverbank at

Luggage Point at or adjacent to the site of the later wharf used throughout the construction period. The use of the term 'temporary' is potentially confusing but the tramway itself was also described as 'temporary' at this time.

Tenders were invited for the construction of three sections of the main sewer in May 1913, including for Contract No.6 as follows:

'Sealed TENDERS will be received until 12 o'clock noon, on THURSDAY, the 3rd day of July, next, for the construction of the following works:
1. CONTRACT No. 6/1913. The construction of wharf, channel, and basin, tramline, embankments, roads, coal silo, pump shaft, drain and sewer, and all appurtenant works, Shire of Toombul'.⁴

The lowest tender for the No.6 Contract, from Lane & Peters, came in at double the Board's estimate. Delays followed, with questions being asked as to whether Luggage Point was the best place for the treatment works, and whether a deep-level sewer was the best solution. These matters were not resolved until November 1913, when it was decided that the MW&SB would carry out Contract No.6 as planned but using direct labour.⁵

In February 1914, tenders were invited for the plant and equipment that the Board would need to construct the tramway, temporary powerhouse and its section of sewer.

'TO MACHINERY MERCHANTS, IRONFOUNDERS, AND OTHERS.

SEALED TENDERS will be received for the Supply and Delivery of New and/or Second-Hand Steel Rails and Side Tipping Trucks; for the Supply and Delivery of Hydraulic Plant and Air Compressors; for the Supply and Delivery and Maintenance of Hydraulic Shields, Locomotive, Cranes, Concrete Mixer, and Machine Shop Equipment; for the Supply, Delivery, Erection and Maintenance of Power House Equipment and Overhead Transmission Gear.

Tenders for Steel Rails and Side Tipping Trucks close at this office at 12 o'clock noon on Tuesday, 3rd March, 1914.

Tenders for Hydraulic Plant and Air Compressors, Hydraulic Shields, Locomotive, Cranes, Concrete Mixer, Machine-Shop Equipment, Power House Equipment and Overhead Transmission Gear, close at this office at 12 o'clock noon on Tuesday, 31st March, 1914'.⁶

Towards the end of March 1914, the MW&SB officially informed the Toombul Shire⁷ and Sandgate Town Councils of its intention to exercise its powers to build the tramway. The alignment would run from near Pinkenba railway station within the gazetted road reserve leading to Luggage Point.

The tender for steel rails from Gordon Faine Ltd, a local agency, was accepted on 20 March 1914 at a price of £1581 3s. The tender for side tipping trucks from the Australian Metal Co Ltd was accepted on 9 April 1914. The tender from Gordon Faine Ltd for a 550v electric locomotive, overhead transmission gear and power house equipment was accepted on 9 May 1914. The tender price for the overhead transmission gear was £1576. Fourteen sets of points in 14 lb rail and just one in 28 lb rail, together with a turntable for use at the wharf were ordered from the Australian Metal Co Ltd on 9 July 1914 at a price of £118 6s 6d. A large quantity of timber for sleepers, trestles, transmission poles and wharf piles had been ordered from local timber merchants A.J. Kirby & Co on 21 January 1914.⁸

[§] The numbering of shafts is potentially confusing as many shaft numbers changed as a result of deviations during the course of the project. Where it is necessary to mention them, what are believed to be the original shaft numbers are used.

Constructing the tramway

Construction work began in April 1914, and by mid-July, it was reported that only a mile of platelaying remained to be completed and more than 10% of the poles had been erected, while good progress had been made with the temporary wharf, with all the piles to hand. The work included the provision of a telephone line along the tramway route.⁹

On 30 July a gang of eight labourers engaged in building an embankment in mangrove mud below the high water mark at Luggage Point, walked off the job. They had demanded an extra 2s over their rate of 8s per day for working in the soft, slimy mud but were rebuffed and told to hand in their tools and draw their pay. The rate for this work was increased by a shilling a day during August.¹⁰

International affairs had deteriorated since the assassination of the Austrian Archduke Franz Ferdinand in Bosnia on 18 June 1914, and on 4 August 1914, Australia entered the war along with the other nations of the British Empire. Despite the international situation, newspaper accounts through to November continued to give optimistic reports about progress with construction of the Board's railway. The reports may well have reflected the progress of tracklaying, which was completed in October, but the reality in terms of the electrical fitout was somewhat different. Under its contract Gordon Faine Ltd was supposed to have completed the installation of the transmission gear by 9 November 1914¹¹ but relying on overseas suppliers for timely deliveries was a risky business even in peacetime. In this case, no fewer than three separate disasters overtook Gordon Faine Ltd in its efforts to fulfil its contracts.

SS *Birkenfels* of the German Hansa line had left New York on 23 July with a cargo that included 25,200 feet of trolley wire, an almost equal length of feeder return cables, and 2540 rail electrical bonds for the tramway. As soon as war broke out on 4 August, an intensive British naval hunt took place to round up the large number of German cargo vessels at sea. In spite of its best efforts to evade capture, the *Birkenfels* was seized in 18 August and taken to Cape Town. Totally unprepared for such eventualities, the various authorities took months to work out what to do with so many enemy prize ships and their cargoes, while importers waited with increasing anxiety and mounting financial losses. It was not until 25 April 1915 that the vessel, renamed *Tandem*, berthed in Brisbane with its precious cargo.¹²

The remaining materials for the overhead transmission gear included bracket arms, lightning arrestors, line and feeder ears, strain eyes, porcelain guard wire insulators, straight and swan neck return feeder insulators, crossing frogs and insulator drop forged turnbuckles. This equipment left New York on SS *Norfolk* of the Federal Steam Navigation Co on 13 September. The *Norfolk* called in at Melbourne and was on its way to Sydney when it caught fire on 8 November off the Gippsland Lakes. The vessel burned for days and was destroyed, including Gordon Faine's entire consignment.¹³

Some materials, including the locomotive that left the Jeffrey works in Columbus, Ohio, on 17 October 1914, and also some engines and generators for the power house did get through, although delayed beyond the time required under the contract. The triple blow was that after the date for the completion of the contract and before the dates of arrival, duties on such equipment had been increased by the Australian government, imposing a further financial impost on the embattled importers. The increased duties also applied to the materials on the *Tandem* (ex *Birkenfels*) when they arrived but by then Gordon Faine Ltd had been forced to purchase replacement materials locally, at increased cost over the imported articles.¹⁴

It is little surprise that Gordon Faine and other suppliers caught up with similar issues pleaded with MS&WB for assistance in their plight. The Board eventually agreed to allow some additional payments for increased duty on the locomotive and power house equipment¹⁵ but otherwise there was little sympathy as, under the contract terms, the suppliers had undertaken the risks concerned.

At the end of January 1915 the Board took the decision to purchase and install transmission gear between the power house and the wharf in order to expedite the sewer construction work, with Gordon Faine Ltd to be charged the cost in accordance with the terms of its contract. This work was completed in March at a cost of £657 11s, leading to further dissension as Gordon Faine argued that the costs were excessive. During February sand and gravel bins were under construction near the Luggage Point wharf, and brackets and insulators were being attached to the power poles, while the locomotive had been delivered.¹⁶

On 26 February, the *Brisbane Courier* gave a description of the works. The distinction made between a 'temporary' and 'permanent' wharf presumably means that the first was needed to construct the second.

'When Pinkenba is reached the work carried out by the board is more apparent. Poppet heads . . . give way to an electric tram track for the board has not begun to work underground but has constructed a long length of five miles of tramway which runs out to a point a little short of Luggage Point where a permanent wharf will be erected, it being intended to receive there all the supplies needed by the board - coal cement sand &c. A temporary wharf has already been constructed. . .

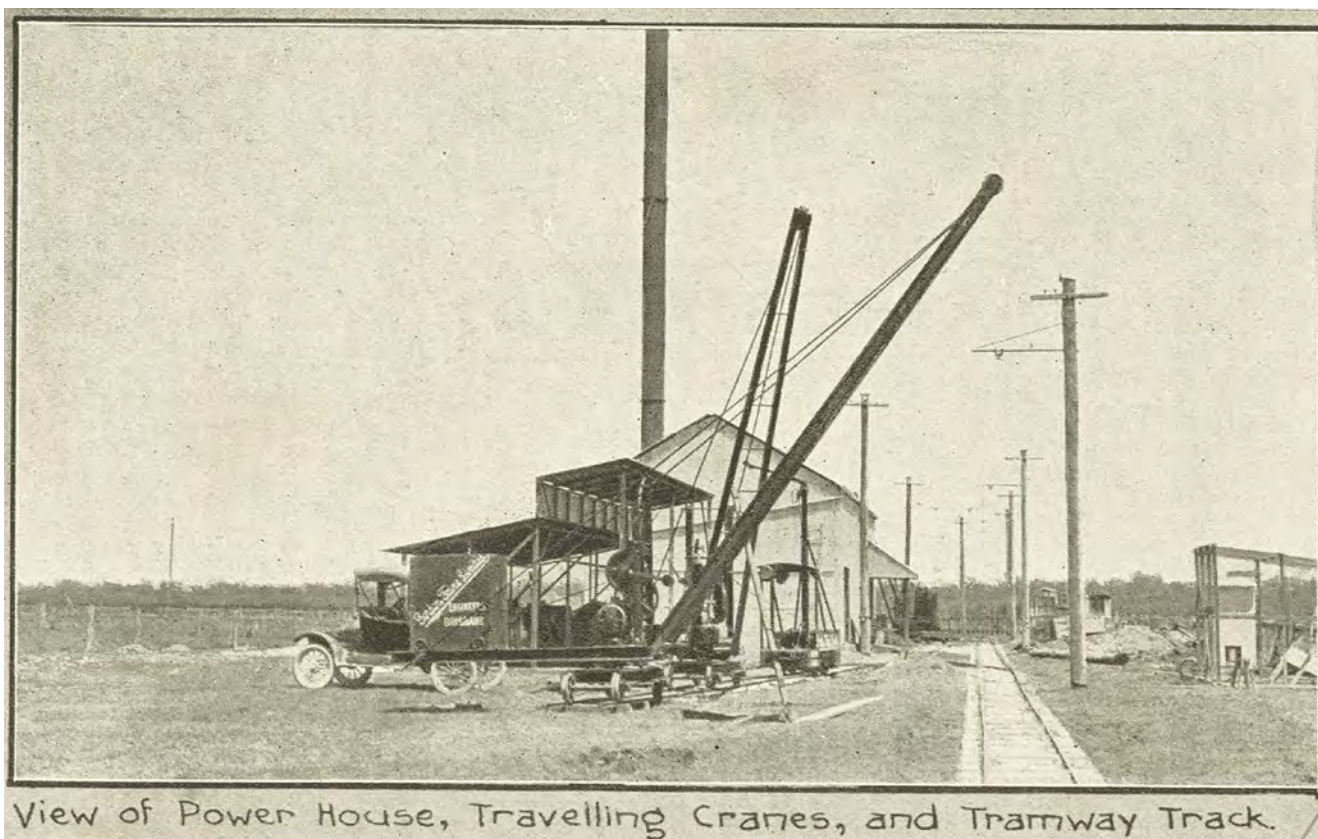
One can appreciate some of the difficulties of tramway construction across mangrove swamps. Heat and mosquitoes impose a heavy burden upon the men who work in a region suggestive of Panama. The tramway has occupied seven months in constructing and the last mile where it had to be raised a height of 6ft on logs, and even then is under water at high tide, constituted a trying task. The tramway is not working yet but the little electric 15-h.p. engine that is to haul the trucks and the trucks themselves are lying there, while the single posts at distances of 40 yards apart bearing brackets to carry the trolley wire are erected, the overhead gear is being installed and a temporary electric power station to supply the motive power required on the whole of the work has been erected and should soon be in working order. It contains boilers engines and generators for creating electric current, more also in evidence a large cement shed containing 4000 bags of cement . . .

. . . the finished effluent will run along an open channel about a mile in length, parallel with the tram track, into the river. . .

The electric tramway will have various uses, including that of hauling the spoil from the sewer excavations and dumping it down to make walls for the treatment beds high enough to keep out the inroads of the highest tide'.¹⁷

The following day, *The Queenslander* published a photo feature entitled 'Electric Plant in connection with the tramway from Pinkenba to Luggage Point'. It showed scenes at the unfinished power house including the locomotive and two jib cranes. The line stretching away towards Luggage Point was also shown, the power poles in place, fitted with cross arms for the telephone lines, and with the brackets and suspenders for the trolley wire and insulators for the return feed cable in place, but otherwise bereft of transmission gear.¹⁸

On 18 March 1915, the *Engineer* reported that the overhead line had been half completed between the power house and the wharf. On completion, the locomotive, cranes, and cement mixers would be ready for use. Three electric cranes would be



View of Power House, Travelling Cranes, and Tramway Track.

This scene shows jib cranes and the electric locomotive stored adjacent to the first temporary power house. Power poles have been erected but stand largely bare because delivery of the transmission gear has been delayed. The location may be the western end of John Street, with the track turning to the left in the distance.

Photo: The Queenslander 27 February 1915

used to remove spoil from the excavation shafts that were to be sunk every 220 yards. The tramway between power house and wharf finally became operational during April 1915 but Gordon Faine Ltd only completed the section from Pinkenba to the power house in June 1915.¹⁹

Early operations

The excavation of shafts had begun by May 1915. Twelve, including the pump shaft, were underway by January 1916 with sidings in place to allow trucks to be loaded with spoil. The spoil was taken down to Luggage Point for use as fill up to the level of the top of the tramway embankments there.²⁰ Sand and gravel for concrete could be craned into tramway trucks directly at the wharf or loaded from the storage bins nearby. Coal and cement were also transported from storage facilities near the wharf. Concrete liner units were being manufactured for shaft lining, and a tramline was built into the area where they were stored to enable them to be delivered by rail.

As early as May 1915, consideration was given to extending the tramline at the Pinkenba end into the nearby railway station yard to enable materials and coal to be transhipped there. It was argued that transport costs were generally cheaper by government railway than by barge, and quotes for coal deliveries supported this notion. The Railway Commissioner was prepared to install a siding off the apex of the Pinkenba fork line at an estimated cost of £206 plus annual rental of £20 for land occupied by the tramway. The Board's Engineer for Sewerage resisted this proposal, possibly because it would add considerably to the complexity of working the line, putting forward the possibly spurious argument that the Board had no power to build a permanent tramway. No action was taken on the proposal, but it was to be revived later.²²



One of the shafts on the Hamilton road.

Headframes were erected to remove spoil from each shaft along the sewer. Tip trucks loaded with spoil were hauled up the shaft to the platform on top of the headframe and the contents tipped into the storage bin below with its prominent chute. This typical example was constructed by the contractor working in the section at Hamilton in 1914 where a surface tramway was not used so spoil would have been removed by horse and cart.

Photo: The Brisbane Courier 13 June 1914

Construction difficulties

In December 1915 *The Metropolitan Water Supply & Drainage Act* was amended and removed any doubt about the Board's power to build and operate tramways. It also provided that all main sewers and shafts should be deemed to be mines. This affected the sewer construction work in two ways. The first was that the workers were required to be paid higher wages as miners, blowing out the estimated costs of construction and causing delays when further government funding was not made available promptly. The second was that the supervision of underground work had to be carried out by certified mine managers. Getting a mine manager's certificate involved years of working in underground mines but did not require any expertise in tunnelling in wet ground. Competent experienced men in sewerage works could not get Mine Manager Certificates. This caused severe management problems as the work of experienced engineers directing construction could be interfered with at any time by mine managers who were totally unfamiliar with the type of work being undertaken.²³

By 1916, great difficulties were being experienced with the shaft excavations because of waterlogged ground. It was becoming clear that tunnelling would only be only possible using compressed air with the installation of airlocks and this would lead to demands for increased wages. In June 1916, excavation work was suspended, and the opportunity was taken to do tramline maintenance. In July it was decided to abandon Shafts 13 to 22, only four of which had been excavated to the full depth.²⁴

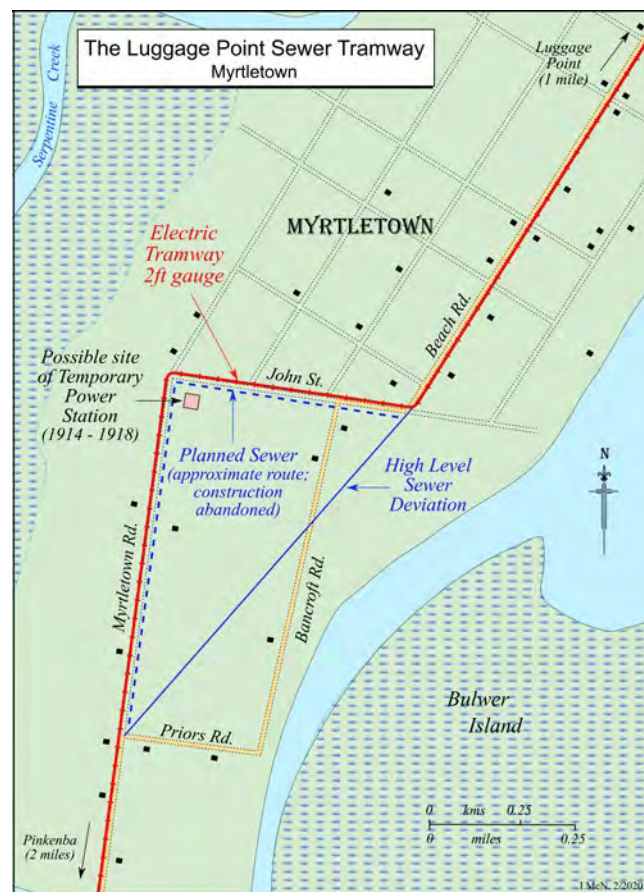
The Board decided to change focus and sink a substantial shaft near the Pinkenba end of the section. This was to be in the Water Reserve about 200 yards from Pinkenba State School and would establish the ground conditions in that area. Excavation of this Shaft 33A began in August 1916 with incursions of water very heavy. After a couple of temporary suspensions of work, each lasting several weeks, the shaft was bottomed out in mid-1917. Upstream tunnelling work then immediately began using a shield without compressed air, but it had to be abandoned after 20 feet in the face of serious ground subsidence. The attempt, along with the shield, was abandoned in February 1918.²⁵ Little work elsewhere was being carried out during 1917.

High level sewer

In May 1918, it was finally decided to abandon the low-level sewer project from Luggage Point back to Shaft 33A. A 'high level' sewer up to 11 feet below ground level would run from Shaft 33A to the existing No.1 pump shaft at Luggage Point. A No.2 pump shaft would be put in near Shaft 33A to allow the sewerage to be raised to the level of the high level sewer. The high level sewer would take a direct line between Priors Road and John Street removing the previous 'dogleg' in the route and saving some 12 chains of sewer. The discarded work included 1531 feet of concrete cylinders that had been sunk into the abandoned shafts, while enough manufactured concrete liner units for 8578 feet of sewer were on hand and surplus to requirements. Some of the concrete liner units were used on the replacement sewer construction but were mostly repurposed for the outfall sewer at Luggage Point.²⁶

Construction of the high level sewer was divided into three sections commencing from the Luggage Point end. The first and third sections corresponded roughly with the sections of original sewer route while the centre section covered the diverted section. Construction of the first section began in January 1919 and was disrupted by the outbreak of the Spanish Flu pandemic, which reached its height in Brisbane

in May and June 1919. This section was completed in April 1921. The second section was started in March 1920 and finished in September 1921. The third section was also started in March 1920 and was completed in March 1922. By May 1919, dragline excavators were in use and later a steam shovel excavator was used. Unfavourable ground conditions made the work very difficult and the work was closed down on at least two occasions due to shortage of funds. When this occurred the ingress of water as a result of the pumps being turned off put work back even further.²⁷



At the end of September 1918, it was reported that the temporary power house had been removed from John Street to Luggage Point for re-erection there. The tram route between the No.1 pump shaft and the treatment works site was being relocated, presumably to clear the area where the works were to be constructed. A new embankment had almost been completed and the overhead wires taken down from the old route along with some of the overhead poles. By the end of October the overhead poles had been put up on the new alignment, and a shed had been built for the electric locomotive, presumably near the power house. By the end of November, the overhead wires on the new route had been installed. By the end of December, a track had been laid to a new pipe making plant, and the tramline from the wharf had been repaired. More cryptic aspects of the December report were that work was being done 'laying out cross line from main line to other side of site' and 'spoil from embankment spread on the old tramline'.²⁸

The electric tramline between Luggage Point and Pinkenba was not relocated to the section of new sewer route. However, a temporary line must have been laid along at least part of the new sewer easement as machinery, sheet piling and coal had to be delivered to the excavation sites, and surplus spoil had to be transported as fill to the site of the treatment works.

During February 1919, 925 yards of track were laid, described as "1060' of 2 ft track laid to supply coal to boilers and run boilers on. 460' of tram track laid from between old shafts No.9 and 10 to run material to the workshop etc and two pass sidings. 1280' of tramtrack laid from workshop to concrete drums and platforms for concrete pipes." In March another 285 yards of track were laid. The exact locations of these track sections are not fully known, but the total length was more than enough to traverse the new section of sewer route.²⁹

By January 1919, operations on the tramway were in full swing once more, supplying construction materials to where they were needed. Traffic from the wharf at Luggage Point was sand and gravel to the sewer construction sites and coal to the power house. Traffic in the reverse direction was cement delivered by road to Shaft 33A and transported from there to the cement store at Luggage Point. By February, coal deliveries by water to the Luggage Point wharf had ceased and from this time onwards, coal was brought to the power house by tramway from Shaft 33A. By March, coal was also being delivered to steam boilers along the high level sewer route. By July, sand and gravel were being delivered to the treatment works site as construction work began there. The wharf area must have been busy with deliveries as in March-April 1919 a 'loop line' was built connecting it with the main line and much effort was reported during the following months to the ballasting of the track between the wharf and the power house.³⁰ The increased traffic also necessitated the purchase of a second electric locomotive, which arrived around March 1920.³¹

Frustration at the slow rate of progress with the High Level Sewer led the Board at its meeting on 22 June 1920 to divide responsibility for the works. Superintending Officer Alfred Upton was to take charge of the construction of the outfall sewer, and of the power house and electric tramway operations. Superintending Officer E J Corless was to take charge of the construction of the High Level Sewer, reporting directly to the Board.³² It is clear, reading between the lines, that this move was not welcomed by Gordon Thom, the Engineer for Sewerage, and by his ally, Mr Upton. A level of tension arose and there were several issues upon which the Board members were called to adjudicate.

Unfortunately, we do not have the reports containing the rival claims and counter claims but can deduce what some of them were from the Board meeting minutes. Complaints centred upon the difficulties experienced by Corless in obtaining sufficient trucks, in receiving sufficient supplies such as sand, gravel and pipes from Luggage Point, and the costs for loading and transport being charged to his works by Upton. Corless stated that he had 40 trucks in February 1921 but needed 66. It was claimed that work on the High Level Sewer had been held up for two days in March due to delays in obtaining supplies. There is the hint of an accusation that in turn he was deliberately delaying the delivery of spoil to Upton at the treatment works site. In May 1921, the Board requested the Storekeeper to report on the number of trucks available. He stated that there were 80 trucks allocated to Upton, who was directed to provide to Corless all that he requested. Upton took a passive-aggressive line and had a defence in that he was also responsible for the delivery of materials to works at the Pinkenba end of the line and needed rolling stock for that task too. It appears that Corless had use of one of the electric locomotives because in May 1921, concrete blocks were being loaded at the Treatment Works by Corless' men and taken to the high level sewer daily by the 'High Level Sewer locomotive'.³³

Pump Shaft No.2 to the end of Contract Section No.6

The 615 yard section of sewer to be constructed between Shaft 33A and the end of Contract Section No.6 at Esker Street, Pinkenba, was served by the electric tramway. Construction of the sewer beyond Shaft 33A towards the city was resumed in compressed air in June 1918. Tunnelling conditions were extremely bad and it was claimed that the ground was equal to the worst conditions ever encountered in Australia. Progress was very slow with the tunnel creeping forward at an average of not much more than 10 feet per week. This was compounded when it was discovered that between the final two shafts, due to a surveying error, the tunnel had been driven almost three feet too high, requiring 170 yards to be reconstructed. It appears that the tunnel was completed in November 1920. The tramway was reported to be in constant use conveying sand and gravel to this section during 1919 and 1920, and many other materials were needed including timbering, concrete blocks and cement.³⁴

There were many difficulties sinking Pump Shaft No.2, which was begun in August 1919 and not completed until 1922. The short length of tunnel from it to Shaft 33A was the last section of the main sewer to be completed, in March 1923.³⁵

Contract Section No.7 and the Dunlop Deviation

The sewer of Contract Section No.7 was to run towards the city from the end of Contract No. 6 to the junction of Nudgee Road and Eagle Farm Road, Hamilton (now Kingsford Smith Drive). A contract had been let in November 1913 to J Atherton, acting on behalf of contractors Rhys Jones, McTaggart & Burch Ltd. It appears that the tender seriously underestimated the difficulty of the work. The very poor ground conditions encountered were compounded in 1914 by wartime circumstances, leading to difficulties with supplies, increasing labour costs and bitter industrial action. Major subsidence at the site of one of the shafts in August 1915 was another blow. All this culminated in the abandonment of the contract in June 1916 and legal action being taken by the contractor against the Board.³⁶

In 1918 the Board determined to adopt a fresh approach to part of this section. It decided to adopt a more direct 2090 yard cross-country deviation for the sewer from Radio Street, Pinkenba, to the point where Eagle Farm Road met the QR Pinkenba branch, bypassing the failed section. This involved the abandonment of concrete cylinders in 14 shafts.

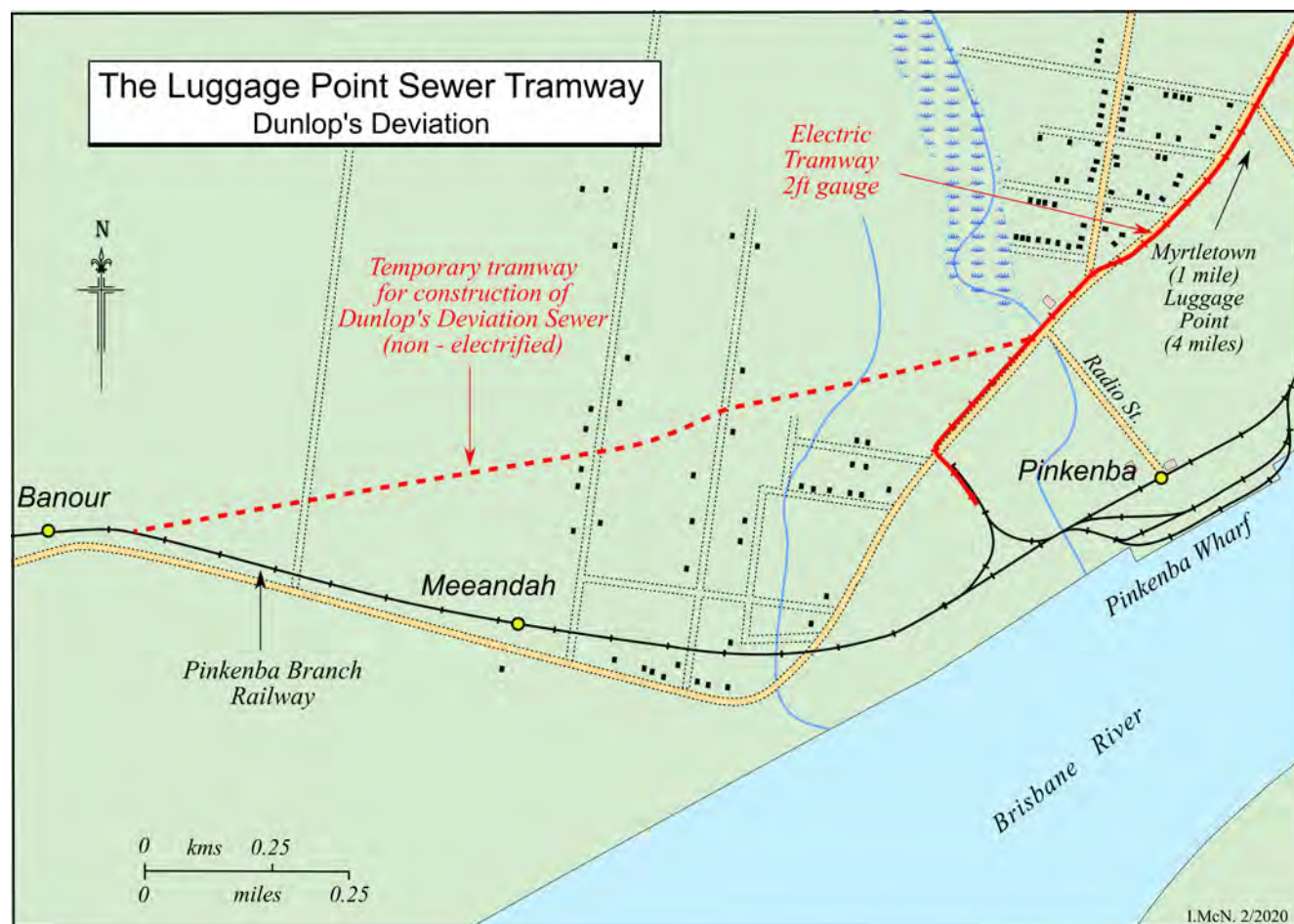
It seems that the faith of Mr Manchester, the President of the Board, in the abilities of Thom, the Engineer for Sewerage, to manage construction work was already in question by this time. Rather than leave the deviation works in the hands of the Engineer for Sewerage, the Board decided to take up an offer from G H Dunlop, an experienced tunnelling engineer, to supervise construction with a financial bonus for completing the job in a set period of 18 months. Taking this step seems to have alienated Thom and other senior staff, and led to unhappy consequences. A similar situation was to occur again in 1920 when Thom was in conflict with Corless, as described previously.

Dunlop proposed to use a tunnelling shield and a patented type of timbering of his own design. Shaft sinking began in April 1918 and tunnelling in June. Very poor ground conditions were encountered. The first shaft had to pass through 10 feet of water before bottoming and a similar situation was found at the other shafts. The presence of salt water in some shafts showed that water from the river was involved. As work went on, it was found impossible to pump out some shafts, water burst into tunnel drives, concreting was hampered by running

water, and large areas of subsidence occurred near the shafts, one as large as 40 square feet in area. There were also industrial problems.³⁷ Unfortunately, knowledge of the promise of a time bonus for completion made Dunlop vulnerable to pressures from both the workers employed on the section, his mine manager, and his professional rivals within the MWS&SB. The Board was obligated to provide Dunlop with the track materials and rolling stock to bring supplies to his section. Screened sand and gravel were vital for concrete production, upon which progress of the work depended. It appears that in September 1918 Dunlop's initial proposal was to lay a line 1½ miles in length to bring sand and gravel to his operations from a wharf at Pinkenba near the Queensland Meat Export Co Ltd's works. However, the President of the Board advised otherwise and by December Dunlop considered that materials could be brought from Luggage Point to the end of the electric tramway and from there hauled by horses over a line to be laid along the course of his section. In January 1919 Sewerage Engineer Thom stated his objection, saying it would be impossible to guarantee regular deliveries and the supplies should be brought from Hamilton by steam wagon. The Board thought it had resolved the matter later in the month when it directed Dunlop to hand over 20 to 25 trucks to Thom – which would give him a total of over 100 on hand – with a requirement that 150 cubic yards of sand and gravel was to be delivered in trucks to Dunlop weekly. Tenders were called for a second electric locomotive in March 1919, which it was said was needed urgently, but when two tenders were received in April, Thom recommended that neither be accepted. Meanwhile, Dunlop had asked for deliveries to be made to Shaft 41, where it appears that he had erected a power house, rather than Shaft 39 which marked the initial point on his section. The Board directed Engineer Thom accordingly.³⁸

All this was somewhat beside the point because on 2 May 1919 Dunlop pointed out that the tramline terminated at Esher Street (Shaft 38) and had not been extended to connect with his line at Shaft 39. It appears that he had been told that he could not be supplied with sand and gravel from Luggage Point to the required specification because there were no screens there. Dunlop requested E J T Manchester, the President of the Board, to direct that the tramline be connected (and said that he could have it done himself if he was supplied with 6 chains of rails), that unscreened sand and gravel be approved for use, and that no later than 12 May no less than 20 cu yards per day of sand and gravel, and no less than 80 cu yard per week, ready for use in concrete, be delivered at Shaft 41. In the meantime, he wanted all trucks to be returned to his section apart from those needed to deliver the sand and gravel he requested.³⁹

On 12 May, Engineer Thom reported that had advised he had arranged for Inspector Upton to deliver 80 cu yards per week to Dunlop in two lots of 40 cu yards. Of the 28 trucks made available by Dunlop, 26 would be needed and two unsuitable ones could be returned at any time. Instructions had been given for a loop line to be constructed near the sand and gravel dump in Beach Road, Luggage Point, to cater for loading for Dunlop. Thom understood that Dunlop would build the connection between Shafts 38 and 39. A week later, Dunlop replied that he had no rails for the connection, no men to lay them, and that in any case, it was outside his area of operations. He did not accept that Thom needed to retain all the trucks. In the face of this petty disputation, the Board President intervened, and Dunlop agreed that with the rail and sleepers he had available he would lay track from Shaft 39 to within about 1 chain of Shaft 38, leaving the connection to the Luggage Point line to be made by Thom. On 28 May the President asked Thom to lay the remaining section without delay.⁴⁰



Dunlop reported that he would complete the construction of the linking tramline from Shaft 47 to near Shaft 38 in the third week of June. The continuing delays with his project, and the lack of action on behalf of Engineer Thom led Dunlop to request to attend the meeting of the Board on 24 June. He rehearsed a whole catalogue of grievances including that much-needed equipment had been denied to him, that he had had trucks taken from him with the assurance that he would receive regular deliveries of sand and gravel that had not been forthcoming, that the Engineer had unjustifiably criticised his work, and that he had been given a steam wagon to obtain sand and gravel from Hamilton but could not use it as his works extended through grass paddocks. The President's response was to have a curt letter sent to Thom on Thursday 26 June reminding him that he had been asked to give the tramway connection his earliest attention and had been asked to provide Dunlop with sand and gravel as long ago as March. Thom was asked to inform the President by no later than noon on Monday 30 June when he would deliver sand and gravel to Dunlop. On 27 June, Thom indicated that he would deliver sand and gravel by loco to Shaft 33A from the next boat to arrive at Luggage Point. Dunlop was asked to make arrangements to receive the sand and gravel at 33A, which was 600 yards short of the end of the electric tramway and a further 2600 yards from the other end of the Deviation.⁴¹

Inspector Upton told Thom that 30 trucks containing 20 cu yards of gravel and 10 cu yards of sand would be delivered to Dunlop at Shaft 33A daily at about 9am and that this daily supply would continue as long as the trucks were returned to Shaft 33A empty by 9am the next day. The first sand and gravel load was 24 trucks and it was brought by electric locomotive to Shaft 33A at 1pm on 16 July. The empty trucks were returned on 18 July. In the days that followed, the proposed schedule broke down. Upton did not deliver the sand and gravel according to the schedule – on most days there were no deliveries at all – but had the excuse that the trucks were not returned within 24 hours. This was perhaps understandable as the trucks had to be hauled by horses up to almost two miles beyond Shaft 33A to where material was needed. It appears that at this point, the electric tramway was only operational to Shaft 33A, although the wires remained in place to at least Shaft 37. Dunlop argued that electric haulage could be restored to Shaft 37 within a week and extended to Shaft 41, the originally agreed point of delivery, within a month.⁴²

Late in August, the President accepted Thom's suggestion that sand and gravel should be delivered to Dunlop at a point 'somewhere near Shafts 40 and 41' on condition that Dunlop provided suitable sites for two dumps (one for gravel and one for sand), fix up the necessary tracks and crossings, and provide 25 more trucks. It appears that this proposal was never put into action because in early October, it was reported that Dunlop had not established the required dump sites, although it appears that some material was left dumped at the side of the tramline. In the meantime, deliveries of sand and gravel to 33A were further curtailed, and restricted to night time, because of the urgent demands for material for treatment works construction. Dunlop finally capitulated and arranged for independent sand and gravel supplies to be delivered to Pinkenba Wharf. This supply arrangement proved to be satisfactory and by mid-January 1920 a new wharf and tramline were in use to bring sand and gravel from the river near Pinkenba Wharf to Dunlop's work sites. This did not mark the end of Dunlop's troubles with Thom and Upton. On 24 November, Dunlop requested the delivery of concrete blocks from Luggage Point to between Shafts 39 and 41. On

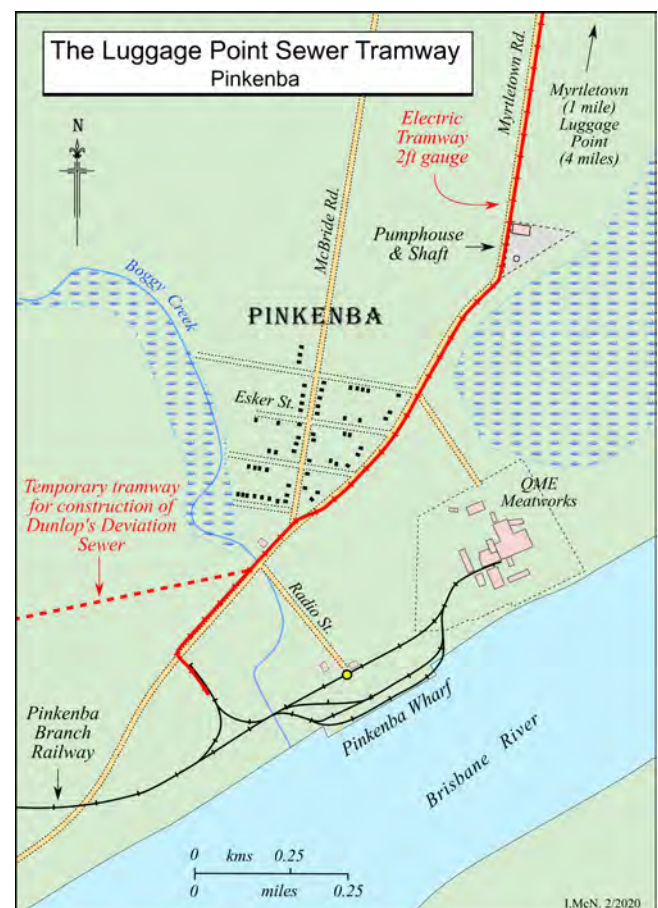
27 January, Upton reported that on 23 January Dunlop had requested that deliveries cease but because Upton had already arranged for two horses to haul blocks to Shaft 38, the blocks were to be taken there and stacked regardless.⁴³

The practical difficulties that confronted Dunlop in terms of very unfavourable ground conditions were probably enough to defeat him, particularly when compounded with industrial disputation. However, the guerrilla tactics used against him by his professional colleagues gave him ample cause for complaint about his treatment. The Board's inability to appropriately manage the system of dual control it had introduced, and particularly its failure to insist upon professional co-operation among its senior officers, led to the farcical events described above. The Board terminated its arrangement with Dunlop in mid-June 1920 with the works in a very poor state and three shafts needing to be abandoned and replaced. The work was eventually completed with day labour after many constructional difficulties had been overcome but all was not well. A major collapse of the sewer in this area occurred in 1940.⁴⁴

No further details of the tramline to Dunlop's Deviation from the Brisbane River at Pinkenba are known. It would have had to cross the 3 ft 6 in gauge siding that extended east of the station to the meatworks. It seems that it would have been worked by horses. It appears that sand and gravel continued to be supplied to Section No.7 by tramline from Pinkenba after the termination of Dunlop's contract. In October 1920, track was laid from Shaft 51 to 53, right through to the city end of the section.⁴⁵

Tramway extension to Pinkenba Station

A possible extension of the electric tramway to Pinkenba station had first been discussed in May 1915. In September 1921, a request for a transshipment platform for coal deliveries at the station was made to QR, in order to enable transport to Luggage Point via the tramway rather than the existing





Myrtletown Road, Pinkenba, in 1921, on the non-electrified section of tramway. The line crosses the road to Shaft 41, at the start of the Dunlop Deviation (out of the picture on the left) running alongside the line of white posts. The location is approximately where the branch to the Pinkenba railway triangle later ran off to the right. The tall wireless mast explains the name 'Radio Street'.

Photo: C.A. Gilmour, The Queenslander 10 September 1921

method of using drays. Coal was delivered periodically to the Board at Pinkenba in 7 or 8 wagons at a time, each loaded with about 10 tons. The request was amended to one for the Board's tramway to be extended alongside the leg of the QR fork line, approximately opposite Shaft 41, to allow for the transshipment of goods. On 23 September the Commissioner for Railways rejected the proposal 'as it would considerably interfere with the work of the Department'.⁴⁶

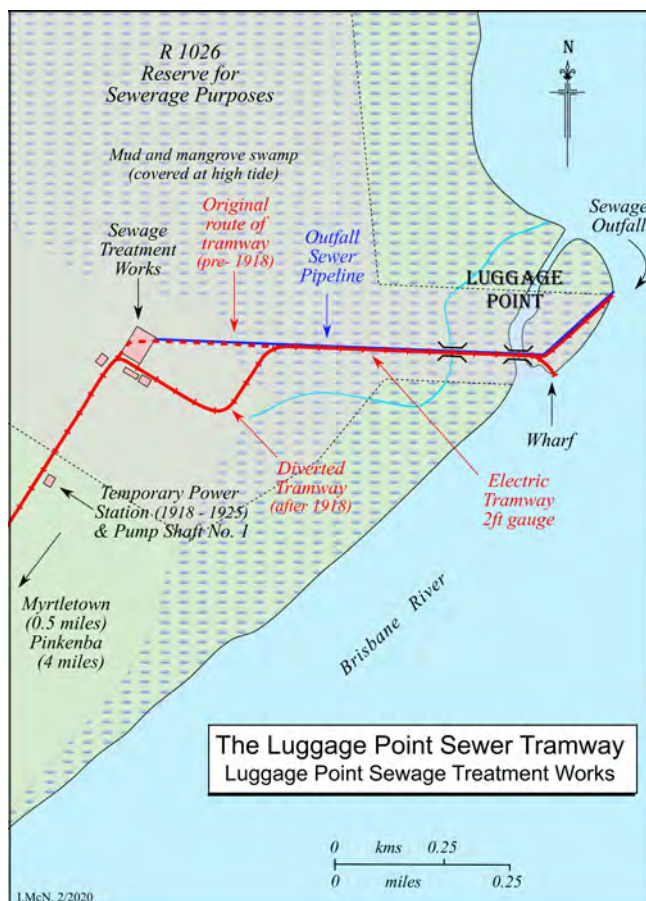
Undaunted, the President of the Board persisted and pointed out to the Secretary for Railways that the last 50 yards of the QR fork line leg were disused and overgrown, successfully extracting an approval to proceed. Construction work to bring the tramway in along the west side of the fork line commenced in November and on 26 January 1922, the QR Weekly Notice announced that traffic was due to commence. For the privilege, QR charged 6d to shunt each four-wheel wagon and 1/- for each bogie vehicle, together with a ground rent of £5 per annum. The Board members anticipated that costs would be saved in the transport of coal, timber, cement, and other materials.⁴⁷ It is not known whether the electric overhead wires were extended to the station yard. From a contemporary map it appears possible that the fork line was accessed from a back shunt into sidings in what is the present day Orient Street with a line crossing Myrtletown Road to the QR reserve, but this has not been confirmed.⁴⁸

The same 1925 map shows another branch line into the station reserve, entering north of the junction of Myrtletown Road and Radio Street and terminating close to the station. If this line existed it could have been part of the one built to bring sand and gravel from a river wharf to Dunlop's Deviation, but this cannot be confirmed.

Treatment works and outfall sewer

The first step in the construction of the outfall sewer had been completed in 1915 with the building of the electric tramway, partially at least on 6-foot timber trestles, from the

treatment works site through the mangrove swamp to the planned outfall discharge site, with a short branch to the wharf. Two tidal watercourses towards the end of the line were crossed on bridges, each 200 ft in length. The tramway was dead straight for the first half mile and then turned left about



45 degrees before crossing the second bridge and ran about a quarter of a mile straight to the discharge point. The short branch to the wharf diverged to the right just after the second bridge. As excavation work on the main sewer progressed, the tramway was used to tip spoil to provide an embankment for itself and for the outfall sewer that was to run alongside it. The 5 ft diameter sewer pipe was laid on a hardwood base and crossed the watercourses on concrete bridges. By July 1920, the outfall sewer had been completed over half its length although its bridges had still not been completed by February 1922.⁴⁹ The tramway was used for all official inspections of the outfall sewer as the construction of a roadway beyond the treatment works was not practicable.

Following the relocation of the tramline within the site, construction of the treatment works commenced in January 1919. The treatment works required not only the construction of buildings and other structures but also extensive filling operations to ensure that the site, and the concrete treatment ponds in particular, would not be inundated by high tides. The schedules indicate that about 75,000 tons of fill and 14,000 tons of concrete were required for the treatment works and outfall sewer. It is believed that all this was transported to and within the treatment works precinct by narrow gauge railway. It is little surprise that the capacity of the railway was so much stretched during 1919-1920, and that no less than 80 trucks were allocated to the treatment works in May 1921.⁵⁰

By November 1923 the works had reached a stage where the pumping of sewage could commence.⁵¹ The state-of-the-art treatment plant had been equipped to utilise an activated sludge treatment process but this was never implemented.

To be continued...

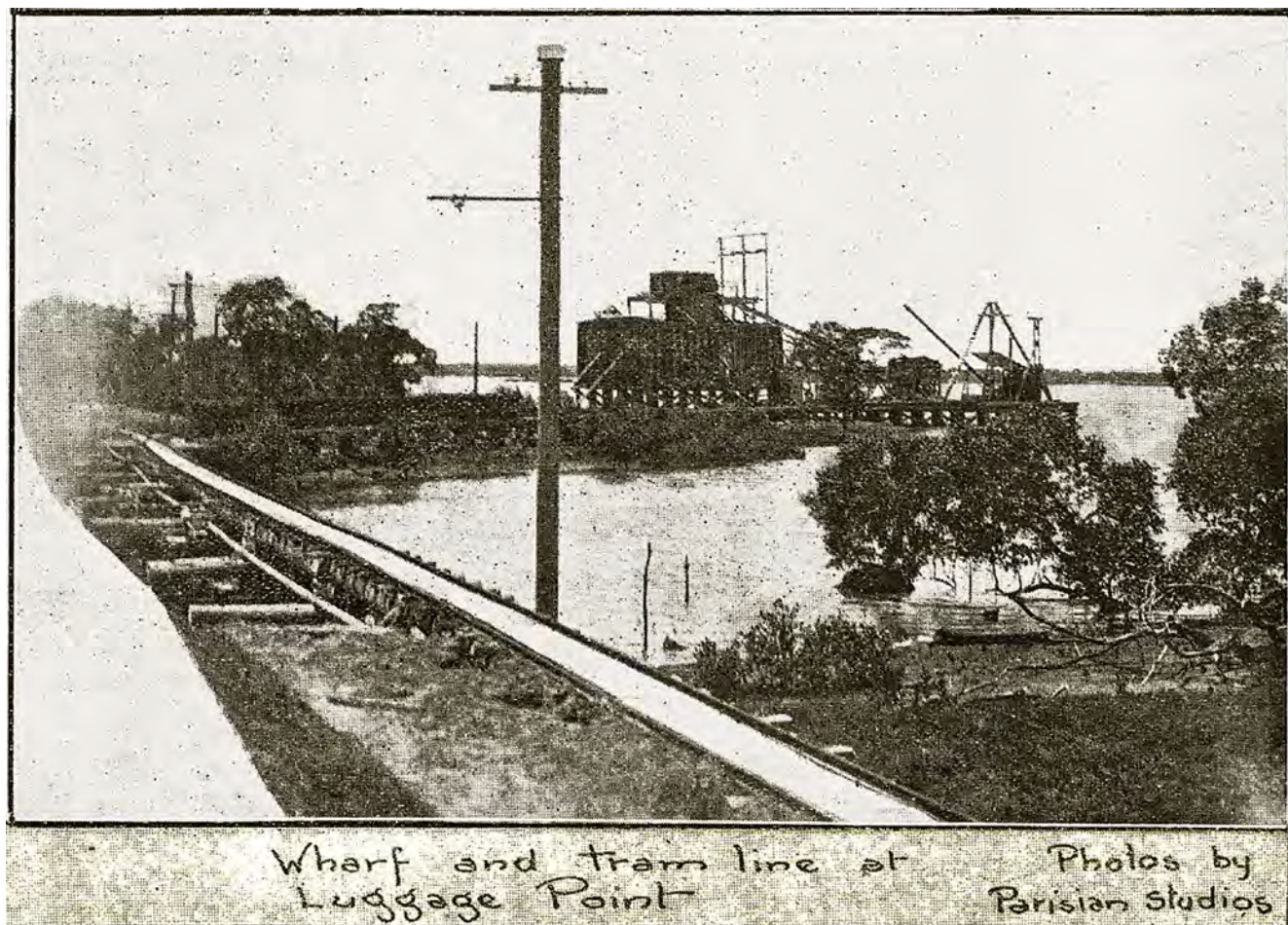
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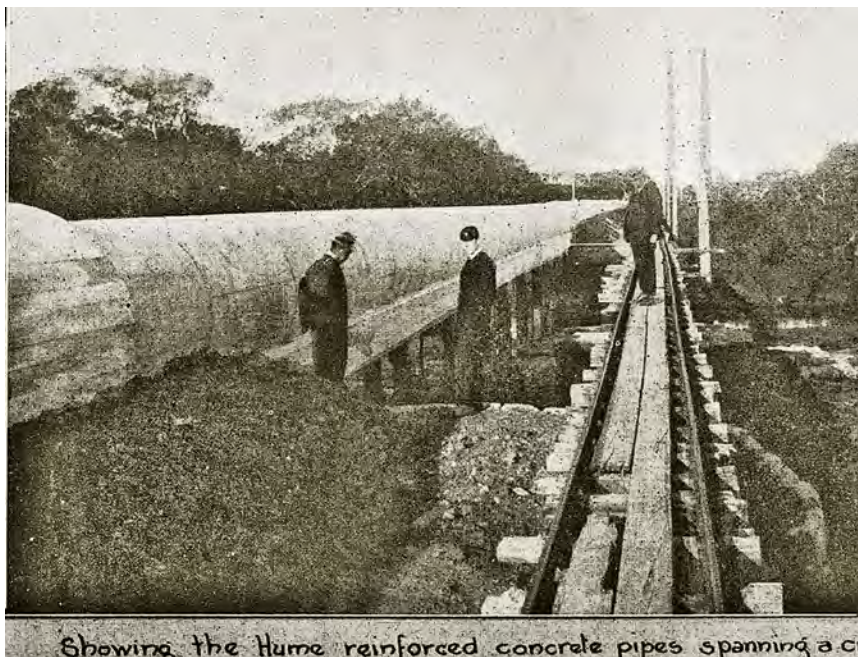
The men who are working all day in swamp-mud, building up an embankment beside the sewage pipe.

The tramway was used to bring spoil to build up the foundation for the outfall sewer in boggy conditions. Photo: Daily Mail 25 November 1923

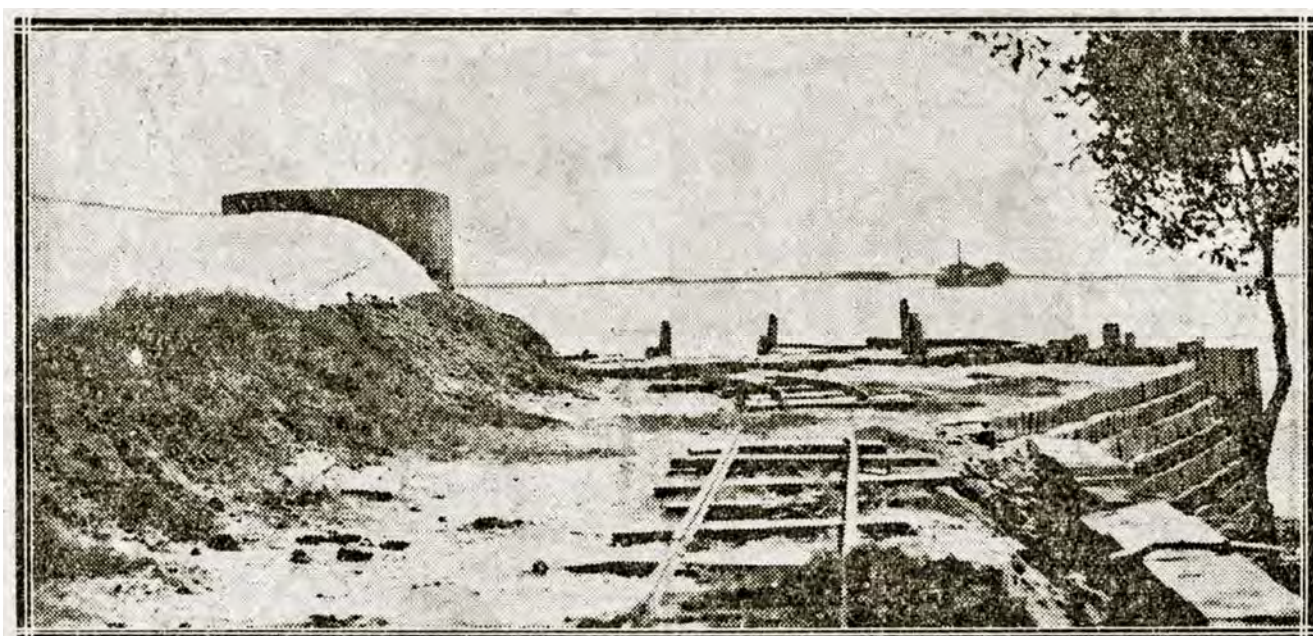


The bridge across the second tidal watercourse on the outfall sewer section of the tramway. The large sand and gravel storage bins can be seen in the distance at the wharf.
Photo: Parisian Studios, The Queenslander 28 April 1923

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Daily Standard, Wednesday 11 August 1915, page 4 <http://nla.gov.au/nla.news-article178888797>



Left: The tramway and outfall sewer at the first tidal watercourse crossing. Photo: Parisian Studios, The Queenslander 28 April 1923
Below: The tramline and outfall sewer terminated at a somewhat desolate spot at the mouth of the Brisbane River. Photo: Daily Mail 25 November 1923



Luggage Point, where the purified product of the treatment works flows into the river.

news-article179901305

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49. Wadley *op. cit.* p.43

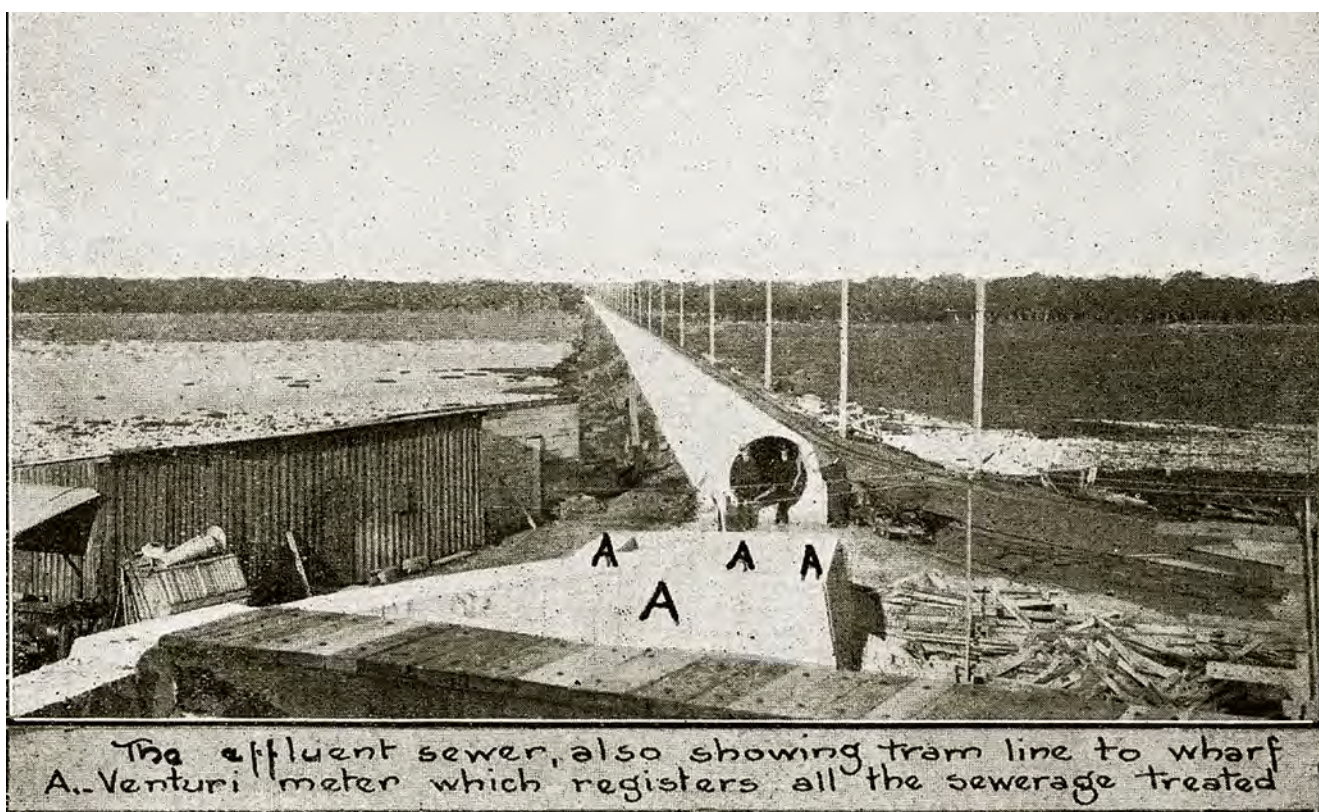
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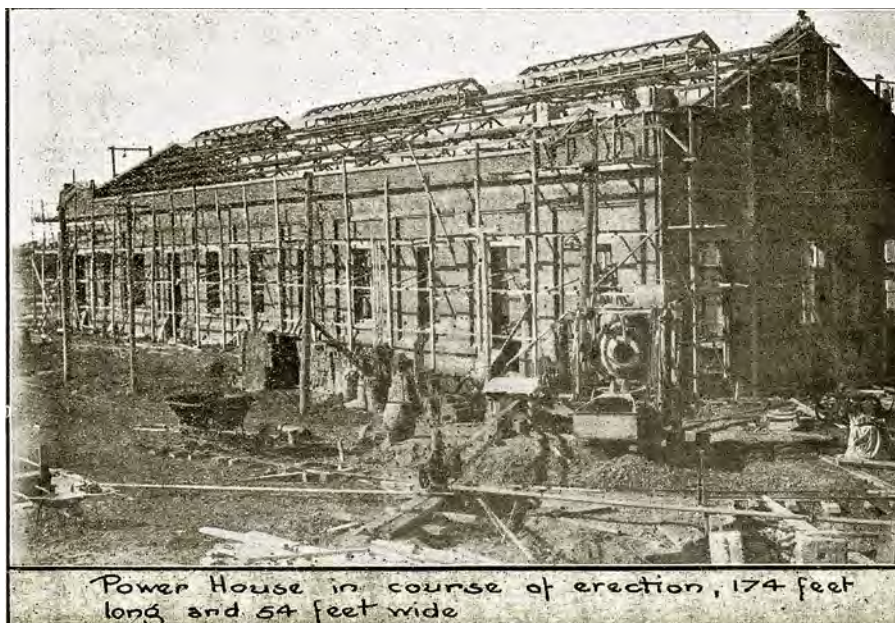
MWS&SB Board meeting minutes, 24 May 1921 QSA ID 661795

51. Wadley *op. cit.* pp. 41-42, 51.

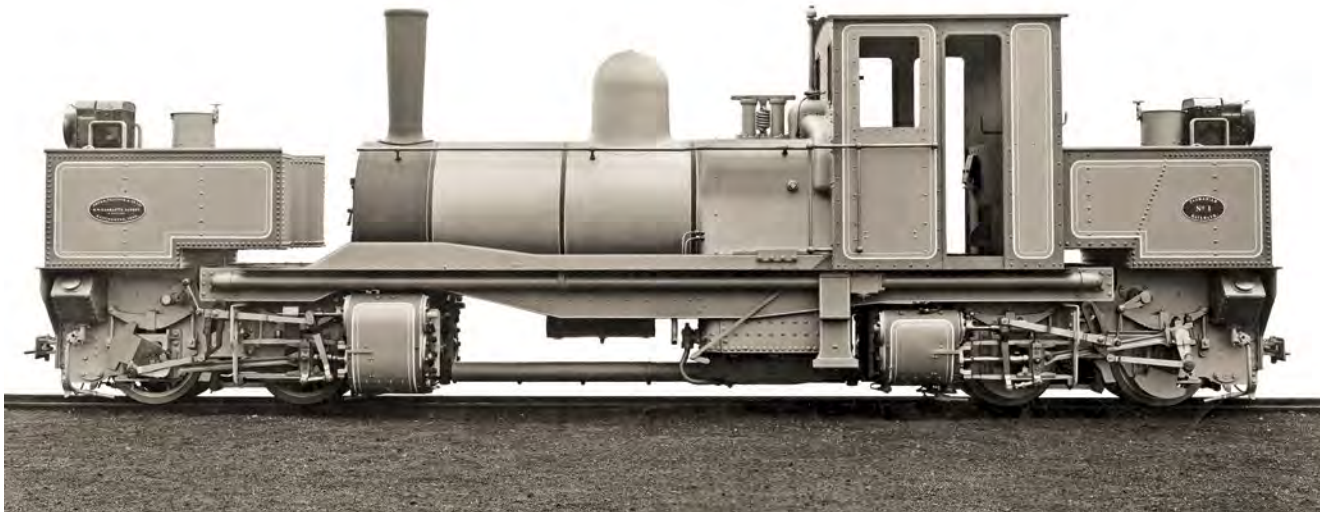


Above: The completed outfall sewer awaits its connection from the treatment works. The tramline comes in from the right and stretches out into the distance alongside the 5ft diameter pipe. Photo: Parisian Studios, *The Queenslander* 28 April 1923

Right: The permanent powerhouse at the treatment plant under construction with temporary tramways in evidence. Photo: Parisian Studios, *The Queenslander* 28 April 1923



Power House in course of erection, 174 feet long and 54 feet wide



"H.W.Garratt's Patent" the builder's plate stated. Maybe Beyer, Peacock were hedging their bets on the Garratt locomotive – if the whole project turned out to be a 'lemon' everyone would know it wasn't their idea. However, within a few years BP were extolling the virtues of Garratts and building them in the dozens. By then the works' plate proudly stated "Beyer-Garratt Locomotive"! From heavy mountain logging on tortuous winding tracks, to express passenger trains between cities, Garratts were quickly found to be the most versatile articulated locomotive. Here we see BP 5292/1909, steam tests and trials done, plates affixed, posing in 'photographic grey' to have its official photos taken, prior to final painting, dismantling, packaging and despatch to Tasmania. Who could have guessed that in 38 years K1 would be back at Gorton.

Photo: Beyer, Peacock & Co Ltd., courtesy Alon Siton /Historical Railway Images - Flickr

Memories of Garratts on Tasmania's West Coast

by Les Morley

Introduction

I reside on the west coast of Tasmania, in Zeehan, a town redolent with the history of the mining and timber industries. Another thing for which it is known is its railway history particularly as this was where the world's first Garratt locomotives ran. There were two of them, known as K1 (Beyer, Peacock builder's number 5292 of 1909) and K2 (builders number 5293 of 1909) with a wheel arrangement of 0-4-0 + 0-4-0. I know that a lot of history has been written on these two Garratts but my story is somewhat different.

In the mid-1940's, as a young boy, I saw them stored in the old Zeehan railway sheds, but unfortunately there was only one complete. By this time most of the mines had well and truly closed, as had the North-East Dundas Tramway (NEDT), which had been owned by the state government. The line ran from Zeehan to Williamsford, a distance of approximately 18 miles (29 km) and I have walked the whole length from Zeehan.

In 1947 I saw a strange occurrence, when I noticed that the railway workers were at the old railway sheds. As an inquisitive young kid, I wondered what was going on, so I wandered over to have a look – this was in the days of freedom when nobody worried about kids wandering around railway yards! They were building a pigsty ramp with railway lines attached to the top and joined, on a slope, to the existing two-foot gauge tracks. I asked Mr Canduff, the boss of the gang (everybody knew everybody in Zeehan at the time!), what they were doing. He said "Young Tom", (that was my late father's name), "They are taking the old Garratt back to England".

So I watched this project with great interest. They had taken one of old Jim Howard's crawler tractors that was fitted with a winch at the rear, as the tractor was used to pull logs out of the bush. Old Jim once owned a large sawmill adjacent to the railway yards, that had closed down about twenty years ago. They ran a rope out and hooked it onto the front of the old Garratt and pulled it up the ramp onto an EBR flat truck that had railway lines and sleepers fitted on the deck. Once loaded it was taken by a C-class Beyer Peacock 2-6-0 engine down the railway yards and attached to the goods train that was getting ready to go to Burnie the next day. I got up early the following morning to see the Burnie goods train take the old Garratt away – as a kid I played on her and had many imaginary trips, pulling the levers and making all these strange engine noises and running up to Williamsford. I reckon she ran a hundred miles and never left the shed!

2ft-gauge K-class Garratt locomotives

K1 and K2 were the forebears of all the Garratt locomotives built over the last hundred and ten years. The concept was conceived by Herbert W Garratt, a British locomotive engineer who, after a career with various British colonial railways, was the New South Wales Railways' Inspecting Engineer in London. Garratt first approached Kitson & Co, but his idea for an articulated locomotive was rejected, presumably because that company were already committed to the Kitson-Meyer type. He then approached Beyer, Peacock and Company, who were only marginally more interested.

He conceived the idea after seeing two huge boilers suspended between two bogies and thought to himself, why not build a locomotive suspended from each end? After several designs he applied for a patent on this type of steam locomotive power. As luck would have it, in 1908 the Tasmanian Government Railways (TGR) was in the process of looking for a locomotive that had good pulling power and could handle steep grades on a line full of tight curves. It was intended

for use on the NEDT, that climbed continuously around bends to and from Williamsford with curves as sharp as 99 ft radius (1½ chains) and 1 in 25 gradients. The NEDT's current largest locomotive, the J-class Hagan's semi-articulated 2-6-4-0T was proving a bit too heavy and cumbersome and something agile was needed.

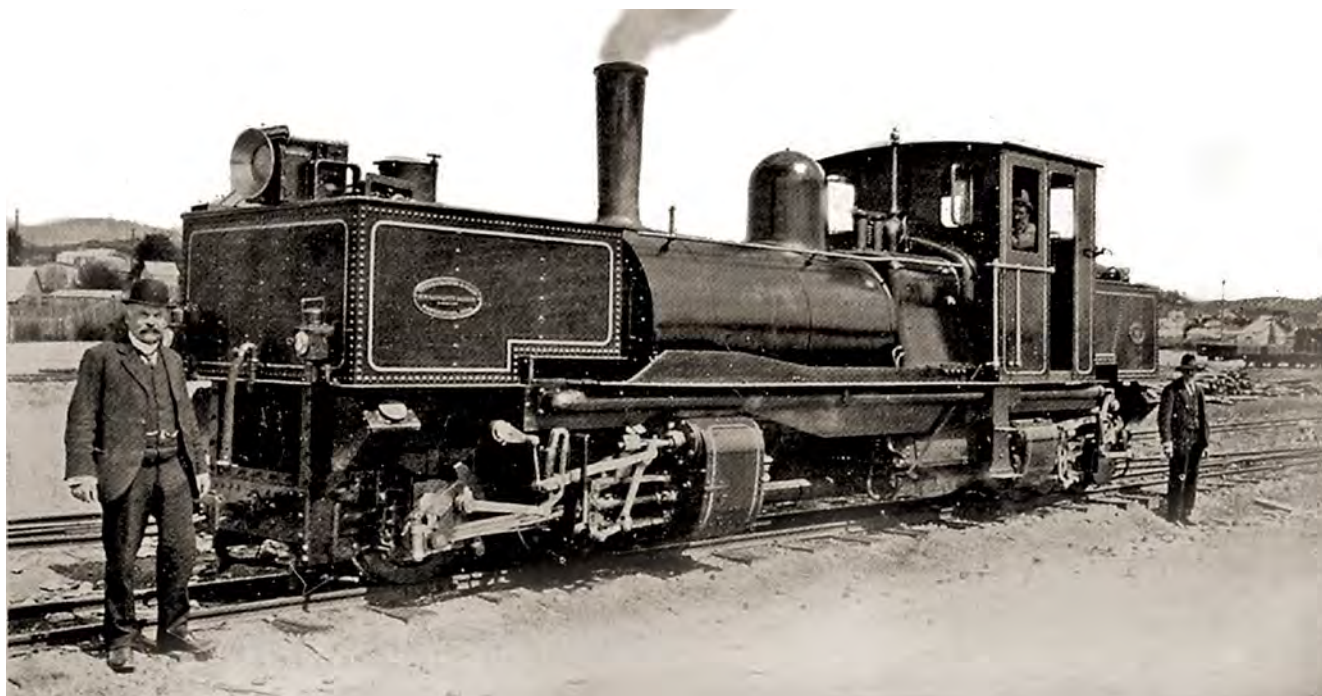
Beyer, Peacock was duly approached by the TGR who had the idea of obtaining compound Mallet locomotives. To summarise, Garratt heard about the enquiry and decided to offer his design to Beyer Peacock who put the proposal to the TGR who then accepted his idea. One proviso was that they be built as compounds, similar to the Mallet. Two locomotives were built in 1909, which became the K-class with locos numbered K1 and K2. With this new style and workings of the Garratt locomotive it introduced a new era in articulated steam motive power. Beyer Peacock built the two 'test' units and they were shipped to Tasmania in parts, then transported to Zeehan to be assembled in the railway workshops.

One was ready on 7 January 1910 when K1 ran on the Comstock line. Being a new design, it had a few teething problems that was to change the workings and design of all Garratt locomotives from that day on. The biggest problem was that the rear cylinders were situated under the driving cab. This in turn caused the cab floor to get very hot. For the driver and fireman this was okay on a cold West Coast day, but unbearable in the summer. The crew used to lay sleepers on the floor so they would not burn their feet. I know this as my late grandfather worked on the EBR and often saw the Garratts on the North-East Dundas line. Additionally, the use of compounding was only ever used on one other Garratt – for Burma in 1927. All others were built as simple engines with the cylinders at the outer ends, which also solved the 'hot floor' problem. The two main railways in Zeehan (the

EBR, and the TGR on 2ft and 3ft 6in) often associated with each other – indeed they needed to as they shared the one central railway station and goods yard.

The two K-class Garratts often hauled trains of between 120 and 150 tons from Williamsford to Zeehan carting ore from the Hercules Mine, which was up on the mountain that was reached by a haulage (see my reminiscences in LR261). They also hauled from other mines on the field. This was the way till the mining boom was over and it started to decline, but the Garratts were still working along with other two-foot rolling stock. By 1929 the gloss had gone, plus the EZ Company, that owned the Hercules Mine had plans to erect an aerial ropeway between Williamsford and Rosebery and this took the trade away from the North-East Dundas line.

In about 1932, with mileage of 8000 on K1 and 10,000 on K2, both locomotives plus the other rolling stock of the two-foot gauge had been sold off or put in storage. I never saw two Garratts together but I found out later that K1's boiler had been scrapped and cut up and it was a composite loco that was sent to England. Over time one engine had been cannibalised to keep the other going so it was K2's boiler and cradle, together with K1's engine units that went overseas and was re-numbered K1. The composite locomotive (now known as K1) was sent back to the Beyer, Peacock Ltd works near Manchester in England. The company restored her externally and put her on display at its locomotive works. Later, when Beyer Peacock closed down, K1 was sold to the Festiniog Railway who lent it to the National Railway Museum in York until in 1995 it was transferred to Porthmadoc in Wales for the Welsh Highland Railway (Rheilffordd Eryri). This railway is set in hilly North Wales and is a huge tourist attraction, so following full restoration K1 was enjoying a new life miles away from Zeehan.



Beyer, Peacock and Co Ltd, having never built an articulated locomotive, nor a 2ft-gauge locomotive, developed Herbert William Garratt's idea and then built a pair of 2ft-gauge articulateds, the forerunners of hundreds of Garratts around the world. Costing around £6500, the two engines were tested in mid-September on a specially laid 'corkscrew' track at the Gorton works, and then shipped to Hobart on the RMS Ionic, arriving on 27 October 1909. One presumes the TGR inspected the packages in Hobart as the first loco did not arrive in Zeehan until 1 December. K1 was assembled during December and steamed on 7 January 1910 for a run on the Comstock Tramway. (K2 was erected during January/February.) Here we see K1 ready for its trial run to Williamsford on 12 January 1910, a mild and sunny West Coast day. The TGR's General Manager, Engineer for Existing Lines, Chief Mechanical Engineer plus other officials, travelled up from Hobart especially for the trial; James Stirling, the EBR's General Manager came along for a look as well. Photo: Henry W Judd, Tasmanian Mail 22 Jan 1910



God's own articulated locomotive, a K-class Garratt pauses at Kapi Siding, about 8½ miles from Zeehan, with a string of ore trucks heading for the smelters south of the town. With the original paintwork lining still apparent and carrying its original 'Phos' patent acetylene headlight, one suspects this photo dates from around the time of the Great War.

Photo: W H King, Tasmanian Libraries LPIC147-6-20

In 2019 K1 was transferred to the Statfold Barn Railway in England on a 10-year loan. The loco again needs boiler attention and is not really powerful enough for the lengthy WHR trains and is again under restoration. Why don't they send it back to Tasmania where it belongs and re-build the NE Dundas line? What a tourist attraction that would make!

(For a more detailed list of disposals of NEDT locomotives and rolling stock, readers may wish to refer to a letter from Mr Ralph Proctor in *Light Railways* 148, August 1999 – Ed.)

EBR 3ft 6in-gauge Beyer-Garratts

The next railway to run Garratts to Zeehan was the Emu Bay Railway (EBR) that once had three of these large locomotives. These Garratts were obtained by the railway for the purpose of moving the concentrate ore from the Electrolytic Zinc Company (EZ Co.) mines at Rosebery for at the time the company was in the middle of the development of a processing mill and other construction and wanted locomotives that had the power to move the concentrates. At the time the company had huge plans for Rosebery and the railway did not have suitable locomotives to move the ore concentrates expected from future production. The EBR's largest locomotives at the time were four 4-8-0 tender engines, three from Dübs & Co, Glasgow and one built by Dübs' successor, North British Locomotive Co.

An agreement between the EZ Company and EBR was reached concerning the transport of the concentrates to Burnie. The EZ Co duly placed an order with Beyer, Peacock and Company Limited, at its Gorton Foundry near Manchester for three locomotives, these being builders numbers 6580, 6581 and 6582 of 1929. The wheel arrangement was 4-8-2+2-8-4 and they were given EBR numbers of 12, 13 and 14. The

design was a copy of some Garratts built the previous year for the metre-gauge Kenya-Uganda Railway. They were to be capable of supplying a minimum of about 1000 tons a week to the Burnie wharf to be then transported by ship to the Zinc Company at Risdon near Hobart, plus 200 tons to the smelters at Zeehan. As the EBR was in financial difficulties, the EZ Company purchased the locomotives and leased them back to the EBR on an agreement that they would be paid for over 15 years. The EBR believed that with mining at Rosebery on the move, the railway's finances would recover. Unfortunately, no one had a crystal ball to see what the future held!

The locomotives duly arrived at Burnie on the ship MV Port Alma in mid-February 1930 in knocked down form. Each loco weighed 137 tons and had a total length of over 82 feet. The first one, No.12, was assembled within ten days and given a trial run to Guildford on 2 March and proved a success. On a second trial run, to Zeehan, it derailed between Guildford and Bulgobac siding. Having finally got it back on the line it continued southwards. Unfortunately, as it pulled into the Zeehan Station it took the front edge off the station verandah. Not bad for its second trial run! What a pity no one took a photo of K1 and No.12 next to each other. After this little adventure No.12 was put to work and the other two, numbered 13 and 14 followed after being assembled. In early April, No.12 was used on a well-patronised excursion train to Rosebery – around 200 persons taking the opportunity. According to one newspaper report “... the Garratt locomotive created a new record for speed on the line.” No.14 was given its first trial run, to Guildford, on 28 August 1930. After this run it was returned to the loco sheds and the boiler drained, all moving parts were oiled and greased up and the Garratts were put into storage. The Great Depression had affected EZ's plans.



A brand-new Beyer-Garratt, EBR No. 12 at Burnie station ready to depart. This is clearly an important occasion as evidenced by the assembled personages and the presence of the EBR's long-time general manager, James Stirling (in flat cap, leaning out of cab window). Precise details are lacking but Stirling's presence leads one to believe that it is the first trial load of the newly-assembled Garratt. As such it may well be the 2nd March 1930 when the big Garratt was taken to Guildford Junction (37½ miles distant and over two thousand feet in elevation), and return.

Photo: Winter's Studios, Burnie, courtesy Trainiac – Flickr



Above: Finally doing that for which it was bought. EBR's No.13, purchased from Beyer, Peacock by the EZ Company in 1929, and mothballed for six years due to the depression, finally got a chance to haul ore concentrates from Rosebery to Burnie in 1936. The next few years leading up to the war were fairly good for the EBR, enabling some of the monies owing to EZ to be paid off. Our photo, taken on 3 February 1937, shows No.13, less than a year into its working life, at Primrose Siding, Rosebery and about head for Burnie. Those small driving wheels, 3ft 7in in diameter, together with four cylinders, 16½in x 22in and a boiler pressure of 180 lb/sq in., developed over 42,630 lb tractive effort – just the thing for hauling heavy ore trains on the EBR's 61 lb/yd rail.

Photo: J L N Southern

Below: EBR No.12 has just over a year to go until its date with the scrapper's torch. Assembled during the last ten days of February 1930, No.12 was first steamed at the end of the month, run around Burnie yard on 1 March and ran a trial to Guildford on 2 March. More testing followed including a trial to Zeehan on Sunday 9 March; the Burnie Advocate noting "The residents of Rosebery were scattered along the line all through the district to admire the new locomotive, and exhibited great interest in its unusual appearance". Such was the interest in Burnie at the time, No.12 was used on a special Garratt excursion train to Rosebery on 6 April. Within a few months it was starting six years' hibernation, along with Nos 13 and 14. In our photo, taken on the twentieth of May, 1963 – a cool West Coast afternoon finds No.12 doing that for which it was bought – blasting out from Primrose with an ore concentrates' train for Burnie.

Photo: Weston Langford, courtesy: www.westonlangford.com/images/photo/103027



During this period metal prices were declining, which in turn delayed developments at the EZ Company and at the end of October 1930 the company dismissed 80 per cent of its work force leaving only a skeleton crew working. This put the EBR in another bind for now its freight revenue was dramatically cut and it also took to retrenching some of its work force and cutting costs by reducing wages by one-fifth. All three Beyer-Garratts had been withdrawn, as there was not the tonnage out of the EZ Company. The Garratts were only steamed once every six months to keep them in working order. The little freight and mineral cartage available was handled by one of the Dübs locomotives.

By 1935 the worst of the depression was over and things picked up at the EZ Company. The mine works had been completed under difficult conditions and it commenced operations in February 1936. This in turn put the tonnage up and the three Garratts that had been in storage were pulled out and finally put to work again hauling concentrates from Rosebery and other mines on the West Coast along with freight. It was No.14 that had the honour of hauling the first load of concentrates to Burnie, on 3 March 1936. Production quickly increased – for the 1937 calendar year, the Garratts hauled over 68,000 tons of concentrates to Burnie.

These three large and powerful Garratts worked the Emu Bay line for many years carting concentrates, freight and even did passenger duties on occasions. I saw them many a day, not only in the yard but along the line. Years later when I was working for the Public Works Department putting guide posts on the Rosebery road over the Argent tunnel, between Rosebery and Zeehan, I could hear them roaring up the valley

heading for the tunnel – they sounded marvelous. One never forgets the sound with the noise echoing up through the valley.

After a long working life on the EBR, sadly No. 13 was scrapped in May 1962. No.14 was scrapped in June 1964, and No.12 was scrapped in September 1964. I could never understand why one was not kept for preservation as other steam locomotives with less history than these have been saved and look less impressive. In my opinion they were the ultimate steam locomotive in Tasmania. I later found out they contained a lot of copper particularly in the fireboxes, and this is where the scrap value was.

EBR 3ft 6in-gauge Australian Standard Garratts

Another Garratt class that visited Zeehan was the ASG (Australian Standard Garratt), also with a wheel arrangement of 4-8-2+2-8-4. The ASG was built during the Second World War as an emergency, as most 3ft 6in-gauge railways in the country were running short of rolling stock due to the demands of the war. They were built at various workshops like Midland Junction, Islington, Newport and Clyde. They disappeared from the 3ft 6in-gauge railways of WA, SA and Queensland within a decade or so of the end of the war because of unpopularity with crews, derailments and chronic maintenance issues.

The first one was completed in September 1943 at the Victorian Railways' workshops at Newport and was given the number G 1. As the Garratts came into use they had initial favourable results for they had good pulling power and could make a good speed. However, the icing soon melted off the cake



Stylish from all angles. EBR No.16 Burnie locomotive shed 28 January 1963 – a wonderful photograph inside a very clean shed at night. The ASG was designed in Melbourne by the Commonwealth Land Transport Board under lead designer Frederick Mills, the WAGR CME on secondment. The first rolled out of the shops just twelve months after design work started – a major achievement considering the more than 100 separate sub-contractors involved. The actual locomotives were assembled in WA, SA, Victoria and NSW. No.16 had been assembled at the SAR's Islington Workshops in Adelaide in August 1944. It quickly entered service with the Queensland Railways only to be withdrawn in September 1945, when the war ended. The EBR, sensing a bargain (and being cash-strapped) obtained G16 in 1950, did the necessary modifications and put No.16 to work in mid-1952. Photo: Weston Langford www.westonlangford.com/images/photo/102483 (Colour changed to B&W)



Primrose, near Rosebery, 28 January 1963. No.18 with a string of loaded ore concentrate wagons in tow, on a damp West Coast afternoon, departing for Burnie. Emu Bay enginemen were divided as to which Garratt class they preferred – each had its good points but both classes were hard yakka for the firemen! Amongst the visible modifications made by the EBR, the ‘hungry boards’ on the bunker, and the large sandboxes and ladders on the front tank are the most obvious. But underneath and out of sight, a good deal of frame strengthening was carried out along with dozens of other modifications. It is unfortunate that they were designed and built in great haste but when the enemy is heading towards your shores speed is of the essence. Just one loco survives, G33, ex-Fyansford, currently being restored at Queenscliff on the Bellarine Peninsula Railway. Photo: Weston Langford www.westonlangford.com/images/photo/102467

as complaints started to come forth. This was due to various design faults, poor workmanship and high coal consumption. Most of the time, under heavy loads, they needed two firemen to keep up the pace and later some crews refused to work on them. The Queensland Railways withdrew all the ASGs from its system by 1949. The TGR, with 20 ASGs, had more success after certain modifications were carried out but by the late 1950s they were withdrawn and remained in storage at Conara Junction till the mid-1960s to be then cut up for scrap.

After the war the EBR recorded increased freight along with passenger traffic. Additionally, the new paper mill at Burnie was increasing production and wished to transport logs. This put a strain on the existing rolling stock. Production had also increased at the EZ mine at Rosebery. This put the railway in an awkward situation for it never had the capital to purchase new rolling stock. Seeking a solution, the EBR inspected and purchased two ASGs that had been in storage with several others at Rocklea Siding in Queensland. The inspection took place and the EBR took an interest in three of the 15 in storage. Once the deal was struck G16, G23 and G24 were earmarked but in the end G24 was not accepted due to the price – the EBR, not having the finance to cover the cost of three locomotives. The two that made the deal were slightly modified and arrived at Hobart in mid-September 1950.

It seems the two Garratts were landed at Hobart for they

could not be unloaded at Burnie at the time due to their 85-foot length, which implies they had been shipped in one piece. They were unloaded at the Hobart wharf, dismantled, and loaded onto TGR flat trucks. It was then found that the boilers would not fit through Rhyndaston tunnel and had to be transported by road to Launceston, then railed to Burnie. Why they weren't simply towed from Hobart to Burnie, in an assembled state, is a mystery! Following further modifications at Burnie, No.16 was steamed in mid-November 1951 and entered service in July 1952. No.17 followed in September 1953. The various modifications are thought to have increased their weight from 119 tons to about 127 tons.

Both of these Garratts served the EBR for a number of years and had to be well maintained. Over time EBR had five ASGs – 16 and 17, followed by G17 (which became EBR 18), then G25 from the Tasmanian Railways (EBR 20) and finally G12, also from the TGR (EBR 20A). In 1962 No.20 derailed and was written off and replaced by No.20A later in that year. 20A, and 18 were scrapped in 1964, whilst 16 and 17 were scrapped in 1966.

The Burnie accident

The reason why EBR No. 20 was written off in 1962 was because on 20 February of that year this Garratt had a most spectacular accident after midnight as it got away on the return

trip to Burnie with a load of concentrates from Rosebery. The Garratt suffered a brake failure on the steep grade into Burnie. It left the tracks with the trucks following down the embankment. The driver and fireman sustained minor injuries but the ASG was later written off. This is one of many derailments and accidents that the EBR had over the years. No.20 had only been purchased in 1961. Traffic demands required another loco and it was replaced by ex-TGR G12, which became No. 20A on the EBR roster.

This was the second time an accident happened on the incline into Burnie. In July 1950 a Beyer, Peacock Garratt derailed and turned over near Brooklyn Crossing, dragging 18 trucks with it. None of the crew were hurt but a few trucks were wrecked. The Garratt was later repaired and put back in service.

The Emu Bay Railway's ASGs were the last to run on any railway as a class though one loco at Fyansford cement works in Victoria remained on standby until 1966. Their reputation helped to give them a short life as far as steam locomotives go but the Emu Bay persevered with them and they remained in service until overshadowed by the diesels. Many enginemen on the EBR claimed them to be the railway's best locomotives.

Editor's Notes: Captioning and additional background research: Phil Rickard.

It is ironic that all three classes of Garratts for the West Coast were ordered in expectation of increased traffic. The NEDT's K-class in anticipation of increased ore traffic from the Hercules mine at Williamsford; the EBR's 12, 13 and 14 in anticipation of new traffic in ore concentrates from EZ's

Rosebery mine, and the ASGs in anticipation of log traffic for the new paper mill in Burnie. All incurred delays in entering normal traffic – indeed the log traffic never came and the ASGs essentially replaced the ageing Beyer-Garratts.

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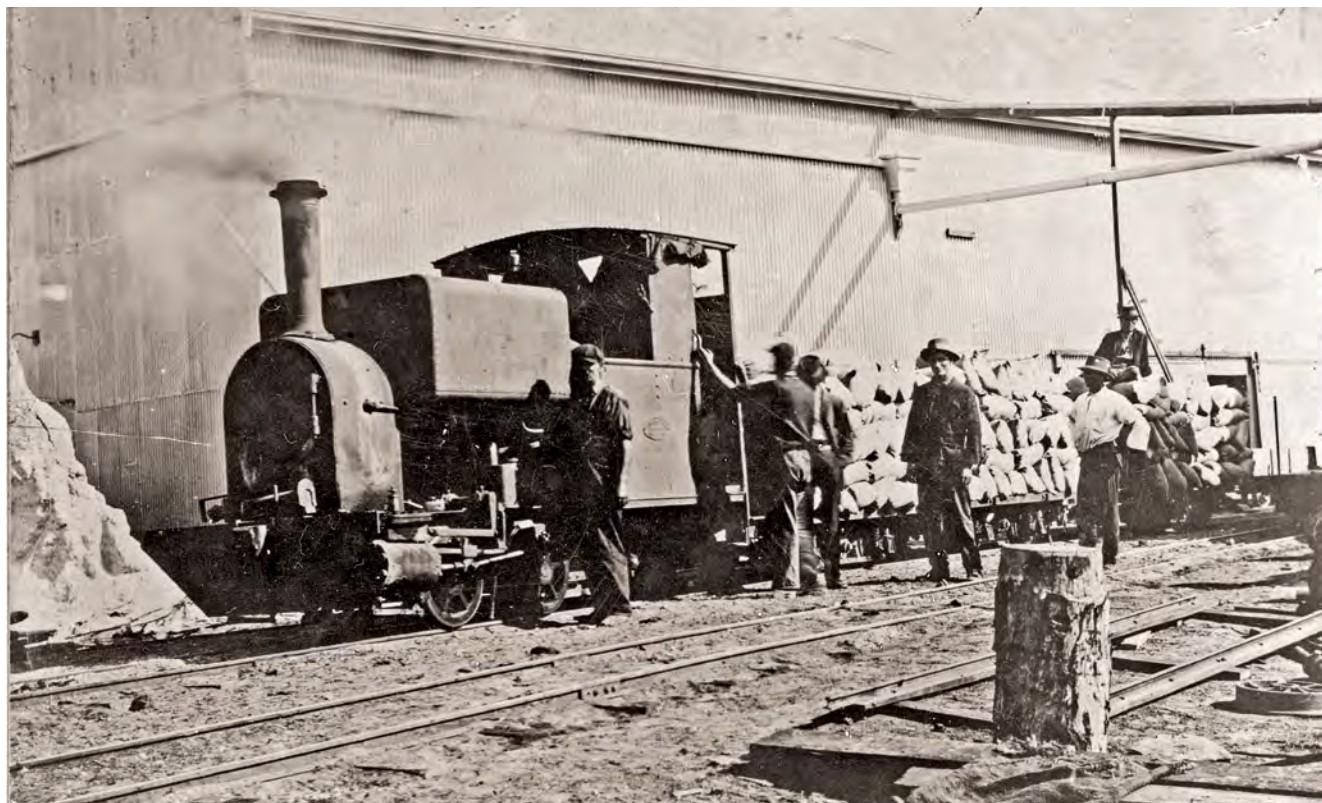
Below: In the early 1960s, the West Coast of Tasmania was a favourite destination of mainland railfans, cognisant that the use of steam on the Emu Bay Railway and the Mount Lyell Abt rack railway were not going to last for much longer. An added attraction on the EBR was the use of Australian Standard Garratts. Where once there had been 57 of these wartime locomotives on six railways, by the early Sixties there were just four left in service, all on the EBR. Fortunately for us, Weston Langford made several visits to the Apple Isle to record for posterity rail operations on the West Coast before they changed forever. Here we see No.18 on a Burnie-bound ore concentrates' train near the 50 Miles. 28 Jan 1963. Photo: Weston Langford www.westonlangford.com/images/photo/102474



South Australian miscellany

South Australia had a wealth of light railways across the State. The former convener of the SA Group of the LRRSA, the late Arnold Lockyer, had an extensive collection of photographs and records of light railways across South Australia, which has now been digitised and is managed by the National Railway

Museum (NRM) in Port Adelaide. Below is a small sample of some of the many light railways used on various activities throughout the State. We gratefully acknowledge the NRM for the images. Any comments or further information from readers are welcome.



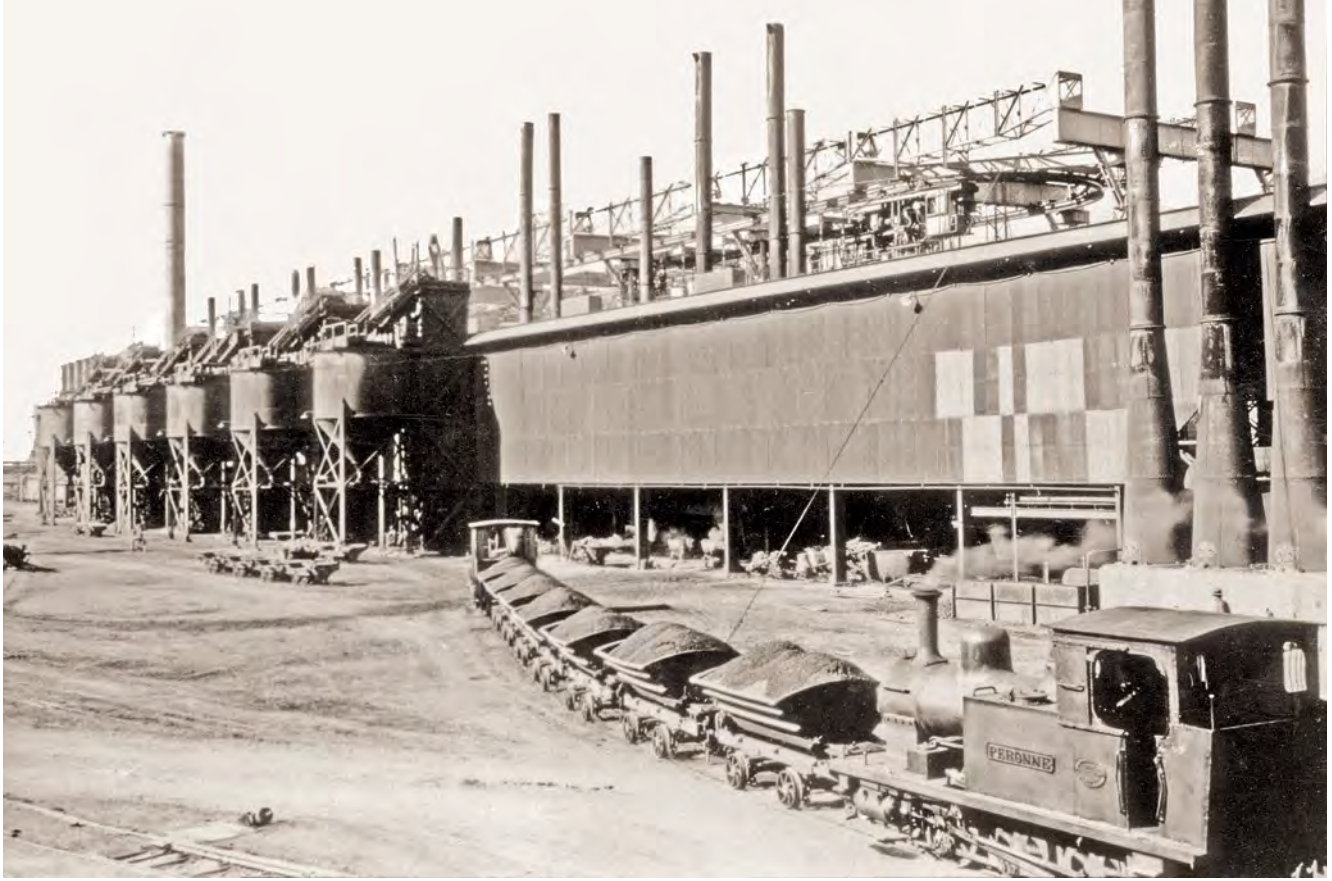
1. Kangaroo Island

Kangaroo Island's longest railway was constructed by the Commonwealth Salt Refining Co. It was of 2 ft 6 in gauge, about nine kilometres long, was finished in February 1910 and was initially operated by horses. In 1930 the Australian Salt Company took over operations. Until 1938 the main motive power was a pair of Kerr, Stuart 0-4-2Ts. Here we see KS B/n 1053 of 1909, known as Fanny, in the 1930s at Salt Lake, the location of the crystallisers and refinery. The locomotive is waiting at the sheds with a load of bagged salt prior to departing for the jetty at Muston. Note the stockpile of prepared salt in the open at the front of the locomotive. Photo from the NRM, Arnold Lockyer collection – courtesy Jeremy Wainwright

2. Kangaroo Island

In 1938, a Day's Engineering 0-4-0 kerosene locomotive was introduced. Our photo, dated 1948, shows the Day's locomotive, minus its original all-over roof, coming out of the store shed at the Salt Lake refinery with a load of bagged salt, presumably heading for the jetty at Muston. The entire operation was closed in 1954. Readers wanting to know more of these interesting operations are referred to Light Railways No.117 (free pdf available at www.lrrsa.org.au) for a pair of complementary articles by Norman Houghton and the late Arnold Lockyer. Photo from the NRM, Arnold Lockyer collection – courtesy Miss N Scherer.





3. Lead Smelters at Port Pirie

At Port Pirie a lead and zinc smelter was established in 1889 and was developed to become one of the largest in Australia. In 1915 the smelter was taken over by the Broken Hill Associated Smelters Co Ltd (BHAS) and an extensive railway system was developed. This undated view shows 3 ft 6 in-gauge Andrew Barclay and Sons 0-6-0 tank locomotive Peronne, (B/n 1545 of 1918), that was one of five operated by the BHAS on shunting duties at the smelters. This locomotive is now preserved in working order at the National Railway Museum in Port Adelaide. A sister locomotive, Pozières, is in working order at Queenscliff, Victoria on the Bellarine Railway, whilst Passchendaele and Port Pirie are both in static preservation in S.A. Photo from the Arnold Lockyer collection - Photo – BHAS Co Ltd courtesy David Mack

4. Mount Bold dam construction

The Mount Bold reservoir is the largest water storage in SA and is located on the Onkaparinga River, 23km south of Adelaide. The reservoir took six years to build between 1932 and 1938, the head contractors being Essery and Cartledge Pty Ltd. During construction several tramways was used across the site. The longest line was about one km in length, from a crushing plant run by Linwood Quarries, to the concrete mixing plant. This view shows a train of crushed rock arriving at the latter site. Note the presence of a horse, possibly for shunting purposes. The locomotive, probably of 3 ft gauge, is an 0-4-0 that bears many of the hallmarks to those built by Day's Engineering, South Melbourne, though some sources say it was built by Linwood themselves. A low resolution copy appeared in LR130, October 1995 in an article 'Mount Bold Dam Tramway' by "Vic Harbour". Any further information would be welcome. Photo from the Arnold Lockyer collection – Photo SA EW & S Department



Light Railways 276 – a milestone ...

This edition of *Light Railways* marks the milestone of having the same number of editions of the magazine in A4 format as all of the previous formats.

Whilst this may not be significant to many, it is significant in the history and development of the Society and the magazine since they were both first established in 1961. The milestone also validates the decision by the LRRSA Council in 1997 when it made the very brave strategic decision to combine two magazines (*Light Railways* and *Light Railways News*), produce a commercially designed format and make the magazine available in newsagents across the country. The rest, as they say, is history as the magazine continues to go from strength to strength and is currently thriving in a market that continues to shrink.

Early editions were produced on stencils and printed on an 1890s Gestetner flat-bed duplicator. The page size was 8 x 13 inches. The next phase was with hand drawn covers and a page size of 6.5 x 8 inches. Then the Society's entire funds were invested in a second-hand rotary duplicator, and inserts of offset printed pages containing photographs were used. In 1968 (from LR 26 onwards) the quality improved markedly by using offset printing and then later even further with art quality paper. The next 110 or so editions were all offset printed and from LR 45 measured 6.5 x 9 inches. PDF copies of all the early editions (and indeed all of them up to LR 262) are available on the Society website free of charge and readers are encouraged to have a look and download them for further reading.

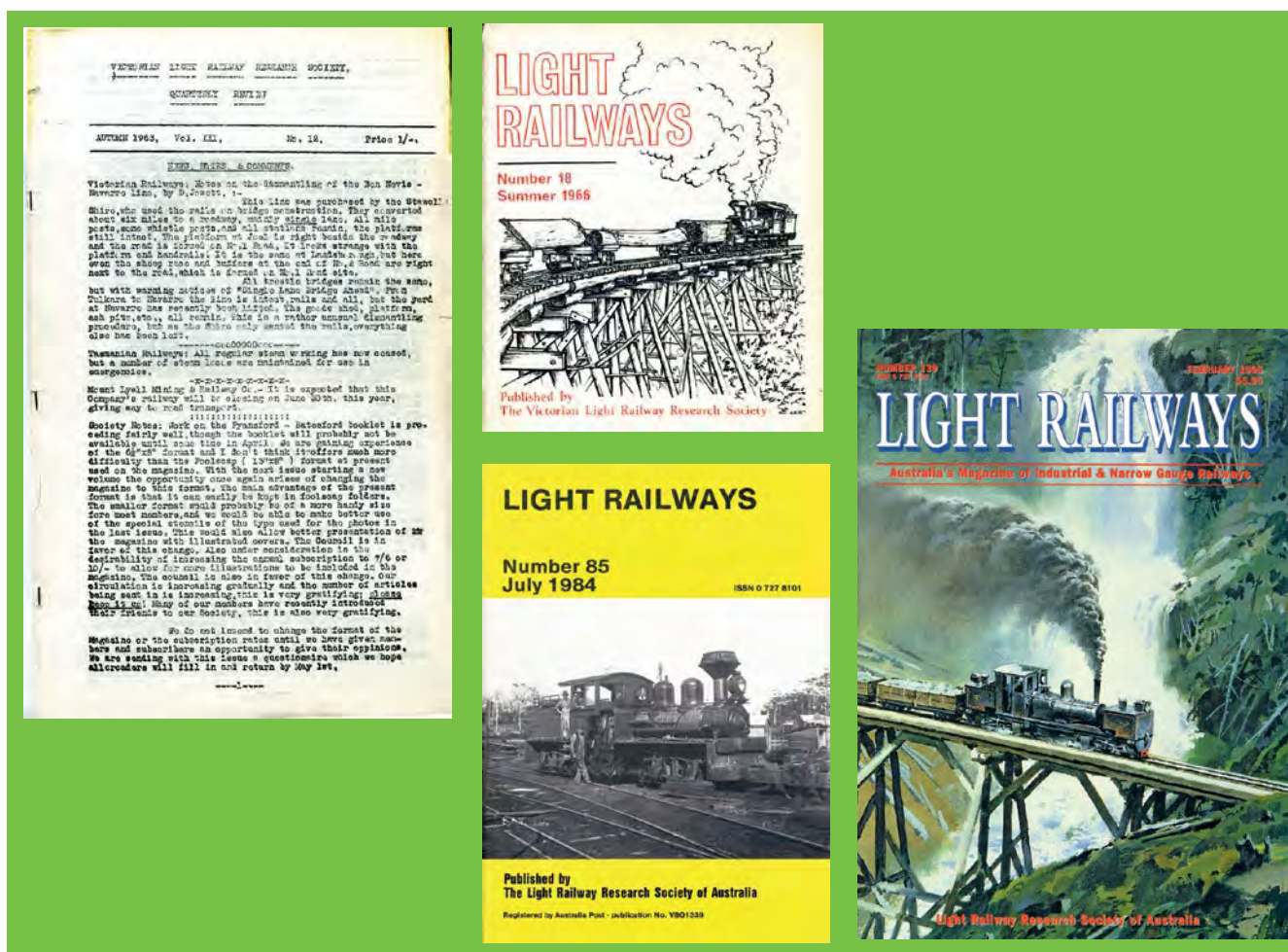
In 1977, following an offer from John Browning, *Light Railway News* commenced publication as a separate booklet from *Light Railways* and contained details of what is essentially now Industrial Railways News and the Heritage and Tourist sections of the current day LR. This publication was sent to members together with LR and continued until 1997 when it was merged back into LR.

In 1997 membership was steadily falling, and it was considered that for the future of the Society something needed to be done to change things. At the national conference of the Society in Sydney in 1997 plans for the new A4 LR to incorporate LRN were hatched. The plan was for a "new look" and more up market magazine that would incorporate the historical articles together with IRN and H&T, all in the one magazine. Also, for the first time, LR would be sold in newsagents. The new Editor was Bruce Belbin who was ably assisted by both Bob McKillop and John Browning.

LR No. 139 was published in February 1998 and the new magazine was readily accepted by both the LRRSA membership – which almost doubled in numbers – and many new readers who purchased it at their local newsagents.

We have now reached edition number 276 and the magazine is still going strong. So, we have now published 138 copies of the new A4 size – exactly the same number as all the other early versions combined.

Well done to all those involved in the production of the magazine over the years.





Industrial Railway NEWS

Please send contributions to:
Industrial Railway News Editor, Christopher Hart
15 Dalrymple St, Ingham, QLD 4850
Phone: (07) 47766294
e-mail: industrial@lrrsa.org.au

Special thanks to contributors to the *Sugar Cane Trains/Navvy Pics* 2ft Facebook page.

QUEENSLAND

Note that the various mills and their railways are now listed geographically below from north to south.

FAR NORTHERN MILLING PTY LTD, Mossman Mill

(see LR 275 p.20)

610 mm gauge

On 27 August, during a mill maintenance period, the bridge gang took Com-Eng 0-6-0DH *Mossman*

(B1719 of 1957) out to the South Mossman River bridge to carry out some remedial work following a derailment there a few days before. On the same day, Clyde 0-6-0DH *Habana* (60-215 of 1960) was spare alongside the loco shed while cabless Clyde 0-6-0DH *Marian* 11 (56-104 of 1956) was parked behind the shed. On 16 September, Com-Eng 0-6-0DH multi-unit locos *Faughy* (AL4190 of 1965) and *Douglas* (AL2562 of 1963) with a rake of fulls was involved in a level crossing collision with an apparently stationary truck in the centre of Mossman. Both locos and a number of cane bins were derailed with the locos being spun around more than 90 degrees. *Faughy* took the brunt of the collision and sustained damage to its hood and cooling system. After rerailling, it was towed away by EM Baldwin B-B DH *Daintree* (7303.1 7.77 of 1977). *Douglas* was seen working by itself on 28 September. Anichs wooden road rail bridge is to be replaced with a new single lane road rail bridge load rated at 44 tonnes. Half the cost will be funded under the Australian Government Bridges Renewal Program.

John Browning 8/20; Fab FM Radio 90.9 & 107.1 16/9/2020; Newport 16/9/2020, 30/9/2020; Chris Neilan 9/20; Gregorio Bortolussi 9/20

MSF SUGAR LTD, Mulgrave Mill

(see LR 275 p.20)

610 mm gauge

Hambledon Mill 6 wheeled brake wagon 11 (built using the frame of Baguley 2514 in 1990) has had extra steel plates added to the headstocks. EM Baldwin 0-6-0DH 11 *Maitland* (4413.2 8.72 of 1972) and Clyde 0-6-0DH 16 *Kamma* (56-96 of 1956) have had Allison transmissions fitted

at some time. The latter has had its number painted on the front and rear ends as has Com-Eng 0-6-0DH 9 *Meerawa* (FC3473 of 1964). The cab on 16 *Kamma* was originally fitted to Com-Eng 0-6-0DH 17 *Deeral* (AD1453 of 1962). Clyde 0-6-0DH 18 *Barron* (64-379 of 1964) was based at the Redlynch Depot while Clyde 0-6-0DH 13 *Hambledon* (64-316 of 1964) which had suffered an axle breakage, was being repaired at the mill. The latter returned to Redlynch on 16 September. Com-Eng 0-6-0DH 3 (A1003 of 1955) is said to be destined for the Atherton-Herberton Historic Railway. On 16 September, the short branch across Peets bridge was observed to be out of use with a concrete block placed on the line just past the junction points. Beyond the junction, the Little Mulgrave line terminates nearby at Poppis Loop. The Little Mulgrave line is intact beyond this but not in use. There are truck dump sidings at Frizzo and Singh. The northern line beyond Redlynch appears to now terminate on the southern side of the Cook Highway underpass.

John Browning 8/20; Gregorio Bortolussi 8/20; Carl Millington 9/20; Mick Brianese 9/20; Chris Stephens 9/20; Andrew Sues 9/20; Iron John Woodrow 9/20

MSF SUGAR LTD, South Johnstone Mill

(see LR 275 p.20)

610 mm gauge

Locomotives based at Silkwood on 25 August were Com-Eng 0-6-0DH multi-unit locos 6 (C2234 of 1959) and 7 (AD1239 of 1960) and 1 (A1821 of 1957) and 10 (A2027 of 1958) but on 28 August, 1 and 10 were back at the mill. Clyde 0-6-0DH 12 (55-60 of 1955) was working on the line to the south of the "Silver Bridge" on 25 August



South Johnstone Mill's Com-Eng 0-6-0DH multi-unit locos 4 (AD1138 of 1960) and 5 (AH2460 of 1962) run light loco over the Russell River bridge on 28 August.

Photo: John Browning

although it was in the mill yard the next day. Clyde 0-6-ODH 14 (63-288 of 1963) is stationed at Mopo in the Babinda area and marshals together loads destined for both South Johnstone and Mulgrave Mills although on 28 August, Com-Eng 0-6-ODH multi-unit locos 4 (AD1138 of 1960) and 5 (AH2460 of 1962) left a load gathered from the Mirrawinni area at James Loop for collection by a Mulgrave loco. Sometime this year, Clyde 0-6-ODH 13 (59-203 of 1959) was stripped and the remains were seen dumped on mill grounds near the "silver bridge" in mid September. It has been stripped down to the bare frame with just the front end of the hood remaining above footplate level. Apparently, it had not been in a fit state to run for over a decade. Some ex Moreton Mill 4 tonne bins are still in use here along with others that were new built to the Moreton design. Late in August, the Japoon Range section of the old South Johnstone main line was observed to be intact but appeared disused.

John Browning 8/20; Jason Sou 9/20; Carl Millington 9/20; Gregorio Bortolussi 9/20; Bill Horton 9/20

TULLY SUGAR LTD

(see LR 274 p.38)

610 mm gauge

Com-Eng 0-6-ODH multi-unit locos 10 (AD1341 of 1960) and 14 (AK2663 of 1963) are in regular use standing in for the Walkers B-B DH locos when one is being serviced or is out of action. Supposedly, none of the other Com-Eng locos are on regular cane hauling duties yet 0-6-ODH multi-unit locos 11 (AD1347 of 1960) and 16 (AH4484 of 1964) had been fitted with Willison couplers by 5 October. Com-Eng 0-6-ODH 17 (AH52100 of 1966) is now out of use, being replaced on navy duties by Com-Eng 0-6-ODH 18 (AO60113 of 1977). 17 along with Com-Eng 0-6-ODH multi-unit locos 12 (AD1351 of 1961) and 15 (AK3574 of 1964) were seen stored in the mill yard on 25 August and 19 September. 18 was seen with the herbicide spraying unit at Old Loop on the line to El Arish on 28 September. The Plasser KMX-12T tamping machine (433 of 1997) was at the El Arish Depot with one of its bogies removed in late August and by mid September, both had been removed. EM Baldwin 0-4-ODH 2 (6/1082.2 2.65 of 1965) was seen parked next to Rockingham Road in the Euramo area on 28 September. It was coupled to a 4 wheeled flat truck which was being used to move the Shifang Railway-Helper Machinery Co. XYD-2 NTO spot tamping machine (109 of 2012) from job to job. EM Baldwin 0-4-ODH 3 (6/1082.1 2.65 of 1965) was in the navy area at the mill on 19 September. The frame of Walkers B-B DH (586 of 1968) was seen in the loco shed on 25 August and 17 September. This loco was originally Queensland Railways DH4 and has been stored at the mill since purchase from Mackay Sugar in 2009. The Willison couplers on Walkers B-B DH locos 3 (643 of 1970 rebuilt Tully Mill 2013), 4 (622 of 1969 rebuilt Walkers 1996) and 5 (650 of 1969 rebuilt Walkers 1993) had been converted to pneumatic operation by 5 October.

John Browning 8/20; Luke Horniblow 9/20; Carl Millington 9/20; Robert Shepherd 9/20



Top: Mossman Mill's Com-Eng 0-6-ODH Douglas (AL2562 of 1963) running solo at Nolis Loop on 28 September while its multi-unit partner Com-Eng 0-6-ODH Faughy (AL4190 of 1965) is out of action. Photo: Gregorio Bortolussi **Centre:** South Johnstone Mill's Clyde 0-6-ODH 14 (63-288 of 1963) pulls a rake of fulls out of the siding at Lloyd Road, Mirriwinni on 25 September. Photo: Gregorio Bortolussi **Above:** Tully Mill's EM Baldwin 0-4-ODH 2 (6/1082.2 2.65 of 1965) and Shifang Railway-Helper Machinery Co. XYD-2 NTO tamping machine (109 of 2012) stowed beside Rockingham Road, Euramo on 28 September. Photo: Luke Horniblow



Macknade Mill's EM Baldwin B-B DH Darwin (6171.1 9.75 of 1975) and Com-Eng 4 wheeled brake wagon 1 (PA101 of 1967) pose for the photographer on the bridge over the Herbert River near the mill on 20 September. Photo: Luke Horniblow

**WILMAR SUGAR (HERBERT) PTY LTD,
Herbert River Mills**

(see LR 275 p.20)

610 mm gauge

From 23 August, EM Baldwin B-B DH *Rynne* (5423.1 9.74 of 1974 rebuilt N+P 2009) and EM Baldwin 6 wheeled brake wagon 2 (7065.5 6.77 of 1977) took over the running of the Victoria Mill sugar train from Walkers B-B DH *Clem H. McComiskie* (605 of 1969 rebuilt Walkers 1991) and EM Baldwin 6 wheeled brake wagon 3 (4692.1 4.73 of 1973). The *Clem H. McComiskie* has transferred onto cane runs at Victoria. New sugar bin frames began appearing at Macknade Mill early in October. Editor 8/20, 10/20

**WILMAR SUGAR (INVICTA) PTY LTD,
Invicta Mill, Giru**

(see LR 275 p.22)

610 mm gauge

The Invicta Mill 0-6-0 brake wagon of 1985 (ex ComEng C1015 of 1957) that previously ran with Walkers B-B DH, the old Jarvisfield (601 of 1969 rebuilt Tulk Goninan 1994), is now paired with Walkers B-B DH Clare (655 of 1970 rebuilt Tulk Goninan 1995) and carries a nameplate to that effect. In late August, seven gray painted bogie ballast wagons with hydraulically operated doors were noted parked in the siding at the old Clare navy depot, together with a ballast plough that incorporates the hydraulic pump for

operating the ballast wagon doors. The Bruce Highway is being raised across the Haughton River floodplain and road overpasses are under construction over the main line and the Shirbourne line to replace the existing level crossings. Because of the extensive sandalwood plantings in the area, the last section of the Dalbeg line beyond the reversing triangle, including Dalbeg 4 siding, has been removed. John Browning 8/20, 9/20

**WILMAR SUGAR PTY LTD,
Pioneer Mill, Brandon**

(see LR 275 p.22)

1067 mm gauge

The area that was once Pioneer Sugar Mill's cattle stud is where decommissioned locomotives and those awaiting rebuilding have been stored. Com-Eng 0-6-0DH locos *Oakenden* (FB3169 of 1963) and D8 (FC3777 of 1964), Clyde 0-6-0DH 11 (65-383 of 1965) and Walkers B-B DH locos 7309 (668 of 1971), 7336 (698 of 1972) and MA1861 (713 of 1973) were noted here late in August. "The Stud" is now to be the base for the navvies and these locomotives are expected to be moved to a new storage area close to the mill workshops where Clyde 0-6-0DH D1 (56-101 of 1956) had been placed on its arrival from Plane Creek Mill. Four 40 tonne Walkers B-B DH locos are to be rebuilt in the Pioneer Mill workshops to enter service in the 2021 season. 7347 (709 of 1973), DH22 (604 of 1969) and the ex-Jarvisfield (601 of 1969) were in the workshops and will become *Jourama* for Victoria Mill and *Kilrie* and *Rita Island* for Invicta Mill respectively. The frame of the ex-*Scott* (669 of 1971) was outside the workshop and will become the *Cairns* for Victoria Mill. Late in August, all the mill's Clyde locomotives were noted in use.

John Browning 8/20, 9/20



Macknade Mill's EM Baldwin 0-6-0DH Hobart (4413.1 7.72 of 1972) heads out past the mill golf course on 31 August. Photo: John Browning

**WILMAR SUGAR (KALAMIA) PTY LTD,
Kalamia Mill**

(see LR 275 p.22)

610 mm gauge and 610+1067 mm dual gauge
On 23 August, Com-Eng 0-6-0DH *Kalamia* (A1409 of 1955) which has been stored out of use for many years, was seen to have been gutted with the hood completely removed. Missing also were the rods and some of the cranks. The Gardner 8LW motor has been obtained by a local and was being fitted to a home built road vehicle in October. The new motor in Westfalia B-B DH *Strathalbyn* (13863.1 8.91 of 1991) is an MTU 2000, a replacement of the same type that was previously in there. 1067 mm gauge Walkers B-B DH 5803 (682 of 1972) is stabled near the sugar loading area and used for positioning molasses tankers. Cut down bins with the wheelsets welded or chained up are used to brake rakes of empty bins at sidings, removing the need for the rake to be re chocked each time empty bins are taken for filling. The cut-down bin at Airdale 4 has been given a "Thomas" identity. John Browning 8/20; Lee Cannavan 10/20; Kieran Koppen 9/20



Kalamia Mill's EM Baldwin B-B DH Burdekin (10215.1 7.82 of 1982) about to traverse a sinuous level crossing on the dual gauge Airdale line on 15 August. Photo: Luke Horniblow

**WILMAR SUGAR PTY LTD,
Inkerman Mill, Home Hill**

(see LR 274 p.40)

610 mm gauge

Late in August, EM Baldwin 0-6-0DH *Carstairs* (6/2715.1 9.68 of 1968) was confined to the loco shed while Com-Eng 0-6-0DH *Alma* (FE56110 of 1975) was still stored in the mill yard. John Browning 8/20

**WILMAR SUGAR (PROSERPINE) PTY LTD,
Proserpine Mill**

(see LR 275 p.22)

610 mm gauge

On 20 August, newly rebuilt EM Baldwin B-B DH 9 (6626.1 7.76 of 1976) was noted in service. It is similar to EM Baldwin B-B DH

10 (9816.1 10.81 of 1981), rebuilt in 2019 but the cab incorporates more glass with a single windscreen facing forward and a window in the lower section of the cab doors. Clyde 0-6-0DH 5 *Canberra* (65-433 of 1965) was seen at Foxdale early in September.

John Browning 8/20; Bruce Baker 9/20



EM Baldwin B-B DH 9 (6626.1 7.76 of 1976) on Proserpine Mill's Kelsey Creek line with a rake of fulls from Mau siding on 13 September. Photo: Luke Horniblow



Eimco B-B DH Farleigh (L254 of 1990) approaches Marian Mill from Mirani on 9 September. Photo: Carl Millington

MACKAY SUGAR LTD, Mackay mills

(see LR 275 p.23)

610 mm gauge

The old link from the Racecourse main line to the former Pleystowe Peri line along Stockroute Road has been erased by the new Mackay Ring Road built over its alignment and replaced by a new link which junctions from the Racecourse line at Schmidtke's Road. After completion of the new link, the first rake of bins was delivered by a Racecourse Mill Clyde 0-6-0DH on 13 August. By September, Clyde 0-6-0DH *St.Helens* (61-234 of 1961) had joined the roster of locos working out of the Pleystowe loco shed. Early in September, locomotives securely stored at North Eton were as previously reported with the exception that Walkers B-B DH 7304 (663 of 1970) has gone, presumably scrapped after its bogies were removed in 2016. Parked in a siding at North Eton was Com-Eng 0-6-0DH, the former 25 *Eton* (FB3170 of 1963) with a rake of loaded ballast wagons. The two Plasser rail jack units (226 of 1980 and 256 of 1982) were noted lying derelict at Marian Mill. The Plasser PBR-201 ballast regulator ex BREG3 (431 of 1997) was noted parked up at Chelona Loop on 4 September. The construction of the Walkerston bypass road has caused the realignment of the line between Palmyra 7 and the Walkerston Homebush Road. Construction commenced late in September.

Mackay Sugar 8/20; John Browning 9/20, 10/20; Steven Jesser 10/20

WILMAR SUGAR (PLANE CREEK) PTY LTD, Plane Creek Mill, Sarina

(see LR 275 p.23)

610 mm gauge

The new bogie brake wagon built by Proserpine Mill this year has been numbered 1 and is paired up with Walkers B-B DH *Allan Page* QR1 (594 of 1968 rebuilt Bundaberg Foundry 1995). The former 1, an Anderson Rea bogie brake wagon (20/7/95 of 1995), has been renumbered 4 and is paired up with Walkers B-B DH *Carmila* QR4 (676 of 1971 rebuilt Bundaberg Foundry 1996). The ex Victoria Mill Chinese built bogie brake wagon built in 2015 is said to be numbered 5. Seen at the mill on 3 September were 8 x Herbert 8 tonne bins, the Plasser KMX-08 tamping machine (415 of 1995) and the Plasser TC50 line car (built in 1982). The bins have had railings fitted to the top of each side, probably to fit more snugly in the tippler.

John Browning 8/20; Bruce Hills 8/20; Anthony Morris 8/20; Peter Canning 8/20; Carl Millington 9/20

BUNDABERG SUGAR LTD, Bingera Mill

(see LR 275 p.23)

610 mm gauge

Com-Eng 0-6-0DH *Sharon* (A1935 of 1959) was in the back of the loco shed at the Fairymead Depot on 18 August and looking out of use. Fairymead based Bundaberg Foundry B-B DH *Booyan* (001 of 1991) hit a cow early in September, putting it out of action for some time. Its place at the

Fairymead Depot was taken by EM Baldwin B-B DH *Miara* (8988.1 6.80 of 1980) with reserve loco EM Baldwin 0-6-0DH *Manoo* (3875.1 7.71 of 1971) being pressed into service at the mill to at least the end of September. EM Baldwin B-B DH *Fairydale* (100048.1 6.82 of 1982) was on loan from Millaquin Mill by 5 October and based at the Fairymead Depot. At 4pm on 17 August, Com-Eng 0-6-0DH *Invicta* (A1513 of 1956) was noted on the McIlwraith side of Church Bridge and Com-Eng 0-6-0DH *Burnett* on the Wallaville side. After parking up *Invicta* in Church Loop, the loco crew boarded *Burnett* (AH2967 of 1963), which made its way back to Wallaville light engine. *Invicta* was seen again at Church Loop on 5 September but by late September, it was back at the mill, leaving just *Burnett* based at the Wallaville Depot. This is contrary to the practice of many years standing of having two locos based at Wallaville. A car and train collided at Raines Road between Sharon and South Kolan on 21 September.

John Browning 8/20, 9/20; Mitch Zunker 9/20, 10/20; Tony Bennett 9/20; Brian Bouchardt 9/20, 10/20; Stuart Adcock 9/20; Ron Stitt 9/20; *NEWS-MAIL* 21/9/2020; Carl Millington 9/20

BUNDABERG SUGAR LTD, Millaquin Mill

(see LR 274 p.36)

610 mm gauge

At 8am on 18 August, EM Baldwin B-B DH *Calavos* (4983.1 7.73 of 1973) made up a rake of fulls at Qunaba and then made its way to the mill.

Possibly, it is stationed at the Qunaba site. EM Baldwin B-B DH *Fairydale* (100048.1 6.82 of 1982) was on loan to Bingera Mill by 5 October. John Browning 8/20; Mitch Zunker 10/20

ISIS CENTRAL SUGAR MILL CO LTD

(see LR 275 p.23)

610 mm gauge

Conversion of cane land to other uses has caused the permanent closure of the following sidings, Ritchie at the end of the Horton line, Bolton on the South Isis line and Trevor and Illet on the Adies line. A cooling tower collapse caused a cessation of crushing at this mill from late September until 11 October.

On 17 August, progress on the new line to Duingal was as follows. Along the old QR formation, the concrete bridge at Middle Creek had been completed but no rails had been laid on it. Track was in place a little to the west of it but no track was evident to its east. Well-ballasted track extended across a large culvert over a tributary of Middle Creek, and appeared to continue all the way to Marule, with the Plasser KMX-12T ballast tamper (414 of 1995) parked up in this section. The extent of ballasting suggested that EM Baldwin B-B DH 10 (7267.1 6.77 of 1977) must also have been moved to this section. On the new section of the route, Old School Road appeared to have been diverted in preparation for earthworks to allow the new line to share the road reserve. Unballasted track had been laid right across the large embankment at Loeskows Road.

On 5 September, progress was as follows. A rail connection from the old QR line to the new route had been made with the construction of the road crossing at Marule, and about 1.7 km of track on the new route had been ballasted to Rimac Road. Loco 10, two ballast hoppers and the rail welding wagon were parked along this section while the ballast tamper was parked at the old Marule Station site. Earthworks were continuing on the new route about a kilometre beyond the end of ballasted track and Old School Road was closed, indicating that formation construction had most likely commenced in that section, which will link completed sections of the Marule Road section and Loeskows Road section. The junction points for the new line to Duingal were installed in the Gregory line at Promiseland Road during the week ending 26 September.

John Browning 8/20, 9/20; Brian Bouchardt 9/20, 10/20; Ben Glossop 10/20

MSF SUGAR LTD, Maryborough Mill

(see LR 139 p.25)

1067 mm gauge

This mill which once had an internal rail system is likely to close after the 2020 crushing season according to local state MP Bruce Saunders. The mill is selling 5,000 hectares of its own cane land for other uses and the amount of cane left which is supplied by independent growers is not enough to make the mill viable. MSF Sugar has a cane supply agreement with the growers until the end of the 2022 crushing season meaning

the mill would be required to assist the cane being crushed elsewhere. There is talk of sending the cane north to Isis Mill.

Farm Weekly 15/8/2020; ABC Wide Bay 19/8/2020

NEW SOUTH WALES

BLUESCOPE STEEL LTD, Port Kembla Steelworks

(see LR 275 p.25)

1435 mm gauge

Pacific National's General Electric Australia Bo-Bo DE D40 (A-241 of 1972) and National Railway Equipment Bo-Bo DE PB1 (209-PB1 of 2014) were seen working at Cringila on 1 October.

Ben Koperberg 10/20

GEMCO RAIL, East Greta Junction

(see LR 271 p.33)

1435 mm gauge

NSWGR Chullora Workshops 4wDH X200 (10 of 1967) was seen shunting here on 12 September.

Brad Peardon 9/20

SOUTH MAITLAND RAILWAYS PTY LTD, East Greta Junction

(see LR 275 p.25)

1435 mm gauge

The motor of Orenstein & Koppel 4wDH 33 (26266 of 1964) has been removed for overhaul. It and Orenstein & Koppel 4wDH 32 (26263 of 1963) are to be used on yet to start maintenance trains on the SMR.

Bradly Coulter 9/20



NSWGR Chullora Workshops 4wDH X200 (10 of 1967) shunting at Gemco Rail, East Greta Junction on 12 September. Photo: Brad Peardon



Locomotive Scott (Walkers 711 of 1973) as rebuilt in 2020 for Invicta Mill, at Upper Haughton 4 on 1 September 2020. Photo: John Browning

Wilmar 40 tonne locomotive upgrades

by John Browning

Wilmar Sugar Australia has embarked on a significant investment in the future of its cane railways, a major program of rebuilding its ex-government railway Walkers diesel-hydraulic locomotives currently in use at five of the Wilmar mills. Many of these locomotives were converted for cane railway use during the 1990s while others were retained in "as received" condition for future conversion. The initial rebuild in this program was of Invicta Mill's *Piralko*, undertaken at the mill in 2017, and two others were done at Proserpine Mill in 2018.

Since then the process has been refined and work has been centralised at the Pioneer Mill workshops, with all design work carried out in-house and significant employment opportunities provided for workshop staff. A high degree of standardisation across mills has been adopted, including across Pioneer Mill's 1067 mm gauge and the other mills which are 610 mm gauge. Now everything above the footplate is replaced. The rebuilt locomotives are equipped with a Mercedes Benz OM502LA V8 448kW/609hp engine, Allison 4000SPR transmission and Renk-Maag K-112/2 reversing box (drop box).



Walkers locomotive 711 as NSWGR 7349, stored at Plane Creek Mill on 1 October 2005. Photo: John Browning

The bespoke transmissions are manufactured by Renk-Maag GmbH in Winterthur, Switzerland, designed specifically for these locomotives. The nose cone cooling package comes complete from Melbourne, supplied by InnoTherm via Penske Power Systems. The rebuilt locomotives emerge in "as new" condition and are significantly enhanced in terms of fuel efficiency and reduced environmental impacts.

Initially, rebuilt locomotives returned to service at their previous locations. However, as the program has stepped up, several unrebuilt locomotives have been taken from those in storage and rebuilt with the identity of the ones they are to replace. The replaced locomotives can then be rebuilt later with the identity of the next to be replaced, and so on. Wilmar keeps track by identifying each locomotive chassis by its government railway number. In 2020, four locomotives are being worked on at the Pioneer Mill workshops and are scheduled to be in service in the 2021 season, with three more planned to be dealt with by the following year.

The following summarises the unfolding of the refurbishment program to date.

Chassis	B/n.	Rebuilt at	Completion	Rebuilt as	Mill	Previous ID	Previous mill
7318	677	Invicta	2017	<i>Piralko</i>	Invicta	<i>Piralko</i>	Invicta
7325	687	Pioneer	2018	<i>Hodel</i>	Invicta	<i>Hodel</i>	Invicta
DH10	592	Pioneer	2018	<i>Jardine</i>	Pioneer	<i>Jardine</i>	Pioneer
DH46	628	Proserpine	2018	<i>11</i>	Proserpine	<i>11</i>	Proserpine
7317	676	Proserpine	2018	<i>Carmila</i>	Plane Creek	<i>Carmila</i>	Plane Creek
7346	708	Pioneer	2019	<i>Cromarty</i>	Invicta	<i>Cromarty</i>	Invicta
DH29	611	Pioneer	2019	<i>Jerona</i>	Pioneer	-	-
DH64	651	Pioneer	2019	<i>Koumala</i>	Plane Creek	<i>Koumala</i>	Plane Creek
DH60	647	Pioneer	2020	<i>Jarvisfield</i>	Invicta	<i>Jerona</i>	Pioneer
7349	711	Pioneer	2020	<i>Scott</i>	Invicta	-	-
DH12	594	Pioneer	2020	<i>Allan Page</i>	Plane Creek	<i>Allan Page</i>	Plane Creek
7310	669	Pioneer	2021	<i>Cairns</i>	Victoria	<i>Scott</i>	Invicta
7347	709	Pioneer	2021	<i>Jourama</i>	Victoria	-	-
DH22	604	Pioneer	2021	<i>Kilrie</i>	Invicta	-	-
DH19	610	Pioneer	2021	<i>Rita Island</i>	Invicta	<i>Jarvisfield</i>	Invicta

In addition, a program to rebuild EM Baldwin bogie locomotives is also proceeding but at a less intense pace, with recent activity centralised at the Proserpine Mill workshop. These are also fitted with a Mercedes Benz V8 diesel engine and Allison automatic transmission. Units so far completed are as follows:

B/n.	ID	Mill	Rebuilt at	Completed
7070.3 4.77	MKD 19	Victoria	Macknade	2018
9816.1 10.81	10	Proserpine	Proserpine	2019
6626.1 7.76	9	Proserpine	Proserpine	2020
7135.1 7.77	<i>Gowrie</i>	Victoria	Proserpine	2020

Thanks to Wilmar's Geof Sundstrom for information used in compiling this report.



Field Reports

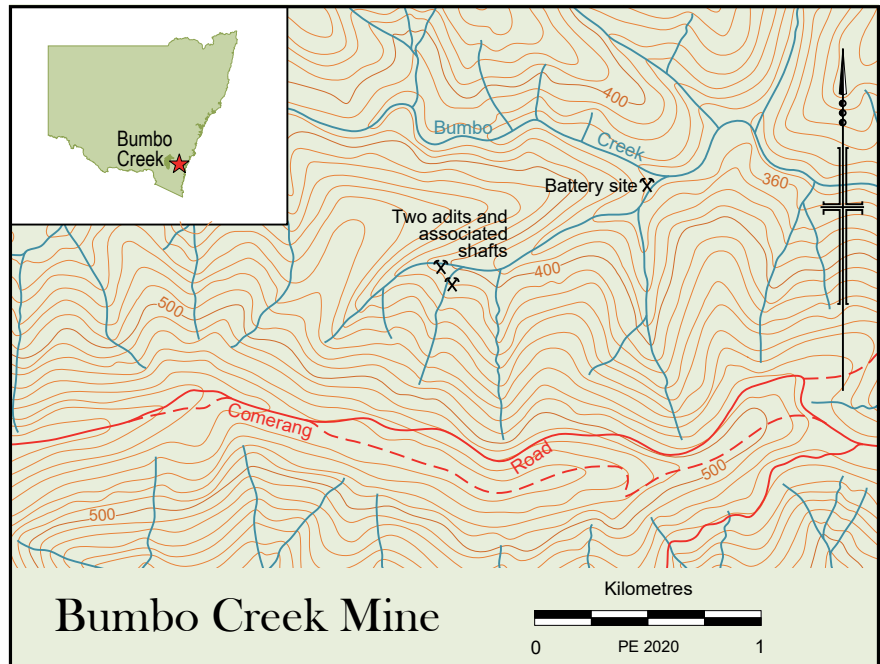
Please send any contributions, large or small, to fieldreports@lrrsa.org.au or to P.O. Box 21, Surrey Hills, Vic 3127.

Bumbo Creek mine site, Bodalla NSW Gauges 1372 mm and 381 mm

The Bumbo Creek mine site (also known as Bumbo No.2) is at an altitude of approximately 425 m and is located inland from Bodalla and just off the Comerang Road, about 270 km south-southwest from Sydney.

The Bumbo Creek mine site was part of the 'Gulf Diggings' (discovered around 1863), which supported a population of around 250 mainly Chinese miners fossicking around and sluicing the creeks. A township grew up at nearby Nerrigundah with substantial stores, a school, a postal service, a police station and a courthouse. The Bumbo Reef, situated in 'fearfully rough country', was discovered by brothers W.F. and E.C. Coman early in 1873. The Comans formed a party totalling eight men to prospect the mine. A shaft lined with timber slabs was sunk but the ingress of water made work difficult, so a tunnel was driven to drain the mine (and prove the reef by raising 100 tons of stone) before machinery was ordered.¹ Gold showed freely in the stone, and encouraged others to take up mining leases along Bumbo Creek. By December 1873, twelve miles of road had been cut and the prospectors' crushing plant was on site ready to be erected. The crushing plant was expected to galvanise the other claims in the locality to undertake more development work.²

The prospectors formed the 'Young Australian Company' (all being native-born with the exception of a single Irishman), their machinery consisting of four head of stamps (formerly owned by Middleton at Mogo) and several of Denny's pulverisers and pans.³ (The power source for the machinery was not given, but may have been water since there is no mention of an engine). Once at the end of the newly-cleared track cut along the ridge, the machinery had to be lowered down into the valley using block and tackle. By June 1874 it was reported that 'necessary tramways for the conveyance of quartz from the mine to the machinery are in course of construction, and display both skill and workmanship'. A trial crushing at the battery had realised 6 ounces per ton.⁴ By 1877 at least 15 mining leases had been pegged on Bumbo Creek but the prospecting syndicate had, by January 1878, let their mine on tribute for a period of five



years,⁵ perhaps indicating that the mine was not turning out as well as expected. For a time, the mine fades from the pages of the mining reports. By 1905 the Bumbo Creek mine was in the hands of Messrs Wilson and Curtis who were crushing at about two ounces to the ton. To date the mine had yielded gold worth £11,000 but the cost of raising and treating the stone is not given, so we cannot be sure the mine was ever a profitable one.⁶ On 5 September 2020 I visited the Bumbo Creek mine. Within one of the two adits were the rotting remains of a wooden rail with metal spike (presumably to a buried sleeper), leading to the conclusion that ore trucks were used to convey ore along the adit upon (mostly) wooden rails, although evidence of an ore truck was not found. At the entrance to this adit was a wheelset with

no identifying marks, and the remains of one length of light rail; no other rail relics were seen. The surprise was that the gauge of the wheelset was measured at 4½ ft [1372 mm]. This is unusually wide, and could not have been used within the much narrower adit, so it had to have been used somewhere outside the adit. However, there was no evidence of a tramway formation departing from the steep-sided site. A 1907 mines report held by a colleague describes 'an aerial tramway from the mine to the battery, ¾ mile'. No mention of other tramways (the 1874 newspaper report of 'tramways' would not preclude the presence of such an aerial tramway in the terminology of the day). I am convinced the ore was transported from the adit(s) to the battery by aerial ropeway and that it was steam-driven at the mine end,



The 1372 mm gauge wheelset outside the Bumbo Creek mine adit. Note the narrow flanges. Photo: Ian Barnes



Terminating wheel and idler wheel at the Bumbo Creek battery site. Both show signs of rope wear.
Photo: Phil Cleaver



Flanged piping at the battery site hinting at the use of water power to drive the ore processing machinery. Photo: Rob Lees

because the only remains of a boiler found was at the adits. Two terminating wheels (one with gearing on the shaft) and intermediate idler wheels were still on site (see photograph) and an iron frame looked suspiciously like the remains of the type of cradle which would be attached to the rope and upon which a bucket or like container would have been suspended. The wheels show definite signs of wire rope wear.

At the battery site, a number of lengths of flanged pipe of approximately 200 mm diameter remain, suggesting water power for driving at least the battery machinery. Their condition suggests these are not from the earliest stage of mining, and may have arrived during a proposed reopening of the works in the 1930s (and never used). However, the same 1907 mines report mentioned above refers to a '4 ft 6 in Pelton wheel' at the battery site, so it appears the battery was water driven at least at that time. At the battery site is a wheelset (of similar wheel diameter to the set at the adit) but at a gauge of 15 inches [381 mm]. I think this wheelset belonged to an ore truck, and is almost certainly from use at the adit.

(For other of the Coman's mining enterprises nearby see LR170, page 26, and LR 241, page 28). Field report by Ian Barnes 10/2020, additional newspaper research by Peter Evans.

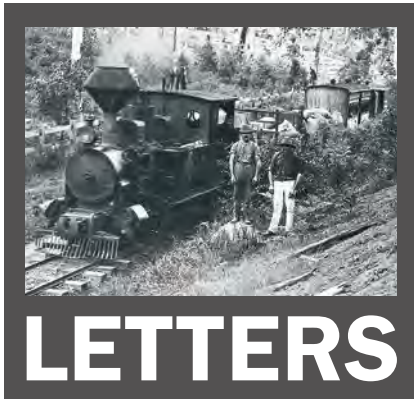
References

1. *Evening News* (Sydney) Friday 28 March 1873, page 2; *Sydney Morning Herald*, Monday 28 July 1873, page 5.
2. *Empire* (Sydney), Tuesday 29 April 1873, page 4; Saturday 9 August 1873, page 4; Monday 1 December 1873, page 3.
3. A reference to a then novel method of ore treatment (pioneered by Thomas Watson of St Arnaud and Thomas Denny of South Yarra) and patented in Victoria in 1885, in NSW and Queensland in 1886, South Australia, Tasmania and New Zealand in 1887, and even in the USA in 1890 – see US patent 423,502.
4. *Australian Town and Country Journal* (Sydney), Saturday 20 June 1874, page 17; *Freeman's Journal* (Sydney), Saturday 21 November 1874, page 5.
5. *Sydney Morning Herald*, Friday 17 August 1877, page 1; *Australian Town and Country Journal* (Sydney), Saturday 28 September 1878, page 22.
6. *The Cobargo Chronicle*, Friday 18 August 1905, page 2.

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Kerang and Koondrook Tramway, Victoria

I recently received a copy of the Industrial Railway Society's new publication *Sentinel Locomotives and Sentinel-Cammell Railcars – their design and development* by John Hutchings, from Camden Miniature Steam Services. The Kerang and Koondrook's 5 ft 3 in gauge Sentinel No 7566 is listed on page 132 of the book.

In October 1962 I travelled on a rail fan trip, which included the Kerang and to Koondrook line. The tramway had been taken over by the Victorian Railways (from the Shire of Kerang) in 1952 but not much had changed in the intervening ten years. Koondrook is on the Victorian side of the Murray River on the border with New South Wales and is about 250 km north of Melbourne. Koondrook was a river port prior to the arrival of the railway and the upgrading of roads.

At Koondrook I spotted some wheels and a wagon shell amongst some prickly bushes. Investigation revealed it was the remains of the Kerang and Koondrook's Tramway Sentinel locomotive because the builder's plate was still attached by one rusted bolt. I made the immediate decision to rescue the

plate into preservation by the only means possible as can be seen in the photo.

In 1989, the local Barham Historical Committee published *The Tramway History 1889-1989* in 1989. It reported the sale at auction of tramway items in 1952 and that the "Super Sentinel" was sold to a Mr Gordon Plumb of Benalla for 21 pounds 10 shillings. It is apparent that he scrapped it on the spot to retrieve the copper firebox, and left the remains including a builder's plate for me to find.

In 1984, a shell-only replica of the Sentinel was built and placed in the preserved Koondrook station yard. It is built on the frame of a goods wagon. The replica resulted from the efforts of the late Don Potts, a well known and respected rail enthusiast with a long-time interest in the area.

In 2014 my wife and I visited Koondrook which allowed me to Blu Tack the original builder's plate to Don Potts' replica for some photos. The Council's commemorative plaque states the builder's number as 5766, whereas the loco's number on the builder's plate is correctly stated as 7566!

A friend and modelling colleague of mine in the Victorian branch of the Gauge O Guild, (VicGOG), casts replica plates as a hobby and he agreed to have a go at a replica of the Sentinel plate, with the intention of passing it over to the Gannawarra Shire for installation on the Sentinel replica. In the process he was able to mould a replacement for the damaged corner. The replicas are moulded in resin with a metallic brass finished to look like the real thing.

In May 2015 I travelled to Koondrook with friend and fellow LRRSA member Bruce McLean from Bendigo and I was able to close a 53-year loop by handing over two replica plates to Geoff Rollinson, CEO of the Shire of Gannawarra, for installation on the Sentinel replica. I understand that the builder's number will be corrected on the plaque.

I recently had contact from Fay Molan from Koondrook, who advised that her father had rescued the other builder's plate and it is displayed in the Koondrook Goods Shed Museum. She also advised that the replica plates have yet to be installed by the Shire! I will follow this up when the Covid lockdown passes.

Roger Hill
via email

The Tasmanian Main Line Railway Reviewed history and locomotive updates, Part 2. (LR 275)

I found this article from Tony Coen and Greg Johnston more than interesting, specifically where it related to TMLR locomotives Nos. 1 to 7. These units certainly had a mixed history, being variously altered in different ways in an effort to get some use from what had obviously been a bad buy. Right from the start, the feud that developed between General Manager Charles Grant and his Engineer/Locomotive Superintendent Thomas Midelton frustrated any attempt by the latter to improve their capabilities.

It might be remembered that Grant had been responsible for obtaining large quantities

of substandard and light rails that had been rejected by the Indian State Railways, a purchase that hung around the neck of the TMLR for years to come. He was also responsible for the offloading of much of this rail onto another of his enterprises, the Hobart Electric Tramways Co. from the early 1890s. Both enterprises found the rail prone to breakages, and too light for the respective rolling stock that consequently suffered from poorly laid track.

One can sympathise with Midelton who was clearly trying to make the best of a bad situation, while Grant was perhaps covering his own back when he summarily dismissed Midelton while he was in the middle of a test run of the altered locomotive, No. 2. That Grant then soon had No. 2 further altered could well have been out of spite.

Nevertheless, of the seven locomotives, several saw relatively long lives, with one, TMLR No 5/TGR E3/E+3 apparently lasting in some degree of service for about 47 years.

The article sparked my interest, particularly as I had come across some history of two of these locomotives when I was researching my article in LR 225, about the New Improved Meyer No. 7 of the Huon Timber Company (HTC).

This locomotive had arrived at the Company's Hopetoun mill at Port Esperance in February/March 1913, but for reasons covered in the article, and perhaps others known only to the HTC, by then part of the Millars Timber & Trading Co., it languished in its packing crates for the next two years.¹

In September 1914, only weeks after the onset of the Great War, the HTC approached the Public Works Department (PWD) with an offer to sell it their white elephant at their original landed cost of £3768/14/7.² The PWD then asked the TGR if it could assess the locomotive on its behalf.³

This set in train a series of investigations into the suitability or otherwise of No. 7 for use by the PWD as a construction locomotive on a number of railway projects running from the Western Line up into the steep hinterland of the North West Coast of Tasmania. In general, many of the various reports were to prove quite negative towards the purchase, but there was one factor that kept the matter alive, at least for the time being. On 8 January 1915, the PWD's Engineer for Railway Construction, FG Butler wrote to his Engineer-in-Chief, Thomas Fowler, extolling the virtues of No. 7, and recommending its purchase.⁴

Butler saw the locomotive being potentially useful in the construction of several lines, in particular that from Ulverstone to Nietta, but also the Prelinna and (never built) Penguin tramways. The Nietta line had steep grades for 16½ miles, and he saw this as too steep for the two locos they then owned, two old E-Class, and they would be severely limited in load capacity for the work, including hauling ballast and other construction material. He noted that an E would not even be good enough to take plate-laying material sufficient for one day's work in one load.



"These E Class locomotives are very old and have to be thoroughly repaired after a few month's work, thus though they were cheap to purchase at first cost, they are a constant expense to maintain in working condition."

On the other hand, he saw one of the E engines as being quite suitable for use on the Stanley to Trowutta line, with its easier grades and curves, and this easier work should not lead to the need for extensive repairs.

On the Nietta line it would be necessary to have two locomotives in steam, and even if they hired a C-class engine from the TGR at 10 shillings an hour (nearly £6 per day!), it would not be a great improvement on an E-class. He saw the Meyer with its abundant power as the answer to his problems.

Fowler endorsed Butler's letter, and forwarded it to his Minister, James Belton, but Belton was cautious and referred it on to others for comment. The rest is history; the sale did not go through, and No. 7 never turned a revenue wheel in Tasmania, and was probably never even steamed there, finally ending up on a lumber tramway in the Philippines.

Butler had not taken into account the fact that No. 7's main shortcoming was its high axle loads, loads that would easily exceed the limitations of the light tracks proposed on the hinterland branches.

Reading the profiles of the TMLR locos in LRs 275, I surmise that the two E-class units would have been TMLR 4/TGR E2/E+2 and TMLR 7/TGR E4/E+4.

References:

1. Tasmanian Archives and Heritage Office, Item PWD213/1/12, Barclay Meyer Locomotive, Purchase from the Huon Timber Company. Documents as in file:
2. Letter HTC to PWD 21 Sept 1914
3. Letter TGR to PWD 8 January 1915
4. Memorandum Butler to Fowler, 18 January 1915, endorsed by Fowler to Minister Belton 23 February 1915

Scott Clennett
Bellerive, Tasmania

Rails to Woomera (LR271, 272, 274)

The photo of the Fowler being unloaded at Port Adelaide is indeed in the Arnold Lockyer collection in the NRM archive at Port Adelaide, and Arnold credited two photos of this to Lionel Bates courtesy of Doug Colquhoun. Also included are three photos of it in retirement at Woomera, and one of the builder's plate, all from the CME at Woomera, with three by Arnold of the Fowler at Sim's scrap metal yard at Gillman in 1981.

One Easter in the mid 1950s I went on the Budd railcar from Port Pirie to Woomera, on from there to Kingoonya (it usually ran to Tarcoola) and back to Woomera, then to Port Pirie to connect with the morning train to Adelaide. That photo of the platform at Woomera showed me the only thing I saw there in the dark - the minimal handrail - before the Peace Officer moved us back into the railcar. On the way back to Pirie we watched the speedo at the trailing end hit 92 mph on one of the downhill sections.

Thanks Mark for your stimulating article.

Les Howard
Coromandel Valley, South Australia

Briseis Tin Mining Company locomotive (LR 275 p.26)

Light Railways is rightly recognised for its publication of well-researched material. Such a reputation should be well-guarded so that the journal will continue to be relied upon as a valuable source for researchers in the future. This prompts me to comment on a letter that appeared in LR 275.

The letter "Briseis Tin Mining Company locomotive" from Ron Madden asserts that the locomotive that worked at Briseis tin mine in Tasmania was Manning Wardle 909. It ends by conceding a lack of absolute proof, but expressing confidence that the conclusion will stand "the most thorough scrutiny". This apparent invitation of scrutiny should not be ignored. We may live in a world where fake news and a disregard for the rigorous treatment of evidence abound, but that is no reason for any decline in the standards of reasoning to be found in material published in *Light Railways*.

The letter states that over twenty years ago Mr Madden alerted *Light Railways* researchers to the existence of a locomotive-worked standard gauge spoil railway operated

at Derby in northern Tasmania in the 1890s by the Briseis Tin Mining Company but there is no contribution in *Light Railways* on this topic from anyone before September 2020. It is stated that at the time, this "revelation" was greeted with some disbelief but that "others" eventually found information to confirm it. This obscure and apparently self-promoting claim has no obvious connection with any proposed identification of the locomotive in question.

The letter states that Manning Wardle 909 was purported to have been used by contractor George Blunt and the source for this was given as the Manning Wardle listing published in a booklet by LRRSA 33 years ago. In fact, that source said it was possibly used by Blunt, which is definitely not the same thing. When the origin of the claim is investigated, it seems that it may have originated from C.C. Singleton's article *The Short North - The Sydney-Newcastle Link Railway* in ARHS Bulletin 335 (September 1965) in which it is mentioned in passing that Blunt had a Manning Wardle 0-6-0 box-tank locomotive. Singleton neither identified it nor provided a source for his information.



Above: Fowler shunter locomotive after retirement at Woomera in South Australia. Photo: Old Polaroid print taken by CME Woomera, Australian Commonwealth Department of Supply - courtesy National Railway Museum

Below: The Fowler shunter locomotive sits amid the scrap at Sims Metal yard at Gillman in South Australia in March 1981. Photo: Arnold Lockyer collection (Ref F 432/20) - courtesy National Railway Museum



Levy, the intermediary who ordered Manning Wardle 909 in 1883, is known to have ordered two other locomotives for Australia, both by Kitson – 2118 (1877) and 2299 (1879) – 0-6-0 tender engines first used by contractor Amos & Co in NSW. While this indicates an association between Levy and Amos, at the end of the day there is no reliable evidence that Manning Wardle 909 was originally with Blunt or with Amos (both contractors were engaged on constructing portions of the “Short North” in 1886) or indeed with any other particular contractor.

It is true that two locomotives were offered for sale from Blunt’s Hawkesbury-Gosford contract in November 1888, but no further detail was given in the newspaper advertisement. This means that to identify one of the locomotives as Manning Wardle 909 is entirely speculative. It is thus unwarranted, and indeed misleading, to state on the basis of this speculation, that it “appears certain” that Manning Wardle 909 went to the Northern (sic) Illawarra Coal Mining Company.

The North Illawarra Coal-Mining Company entered voluntary liquidation in 1890, with the benefit of hindsight presumably explaining why the letter says that company was “overly ambitious.” The fact that one locomotive offered for sale at this time was described as by “Manning Wardell and Co” while the other’s description was simply “6 wheels, 20 tons” says virtually nothing about the identity of the latter nor whether one or the other had lost its builder’s plates. One of the North Illawarra Coal Mining Co’s locomotives was Manning Wardle 912, an identical twin of Manning Wardle 909. If they were both at North Illawarra and one had indeed lost its builder’s plates, its maker’s identity would still have been obvious. In any case, as it is not demonstrated that Manning Wardle 909 was at North Illawarra, it certainly is not

demonstrated that it was the locomotive that went from there to Briseis tin mine.

Much is made of the locomotive weights quoted in newspapers, which experience suggests are not always to be relied upon – for example, an article in *The Colonist* of Saturday 7 February 1891 says the Briseis locomotive weighed about 9 tons.

When advertised for sale the locomotive at North Illawarra was said to weigh 20 tons, while in a Tasmanian newspaper article the locomotive for Briseis was said to be 17 tons. The discrepancy is explained away by stating that Manning Wardle ‘K’ Class locomotives weighed 17 tons empty and 20 tons with coal and water on board. In fact, in *The Locomotives built by Manning Wardle & Co Vol.2*, Fred W. Harman gives the weights as 15 tons 10 cwt empty and 16 tons 11 cwt in working order. The letter cites no source for its alternative weights and so fails to demonstrate that its tenuous argument has any merit. It builds further on its unsupported claim by stating that it is “quite clear” that the quoted cylinder stroke of 20 inches in the 1898 advertisement had been confused with a weight of 20 tons. What is clear is only that the letter confuses a plausible opinion with certain knowledge.

The letter states that, after receiving some observations from me about an unrelated matter, the “penny dropped” to enable the author to identify the Briseis locomotive. The main thing “dropped” in the letter is my name, for reasons best known to the letter’s writer.

It is true that the identities of the unspecified Manning Wardle and Barclay locomotives offered from the sale of the Alexander Amos estate in 1916 can be determined with a high degree of confidence by processes of elimination, but this says nothing about where they were or what they did in the period after the 1880s. The Manning Wardle was almost certainly 909, although it was not advertised as a ‘K’ Class as the letter indicates.

In spite of any alleged “extraordinary coincidence” there is nothing in the previous known history of the Barclay locomotive that implies anything about the previous history of the Manning Wardle.

It may be of some value to summarise briefly what we actually know from newspaper reports about the Briseis locomotive in the hope that someone will take up the challenge to discover more:

- In August 1890, John Ditchburn junior of Melbourne advertised to purchase a light 4ft 8½in gauge locomotive (*The Argus*, 1 August 1890, page 3). Ditchburn was the Briseis Company’s manager (*The Tasmanian*, 29 November 1890 page 23).
- In December 1890, a locomotive, stated to have formerly been used at the North Illawarra coal mine, arrived at Launceston from Sydney per ss *Corinna*. It was said that it would be conveyed the 60 miles to the mine by road (*Launceston Examiner*, 30 December 1890, page 3).
- Around the start of February 1891, the locomotive arrived at Briseis. It was stated that it came by road from Scottsdale (*The Colonist*, 7 February 1891, page 14). Scottsdale was the nearest railway station to the Briseis mine.
- In February 1891 it was reported that the locomotive would be used to remove dirt from a steam navy to some distance over the Cascade River (*Daily Telegraph* 13 February 1891, page 3).
- In March 1891, the steam navy was in operation but the line was not yet fit for locomotive use (*Launceston Examiner*, 28 March 1891 page 3).
- In April 1891 the locomotive was in use (*Launceston Examiner*, 12 May 1891, page 1).
- In July 1891 the locomotive had been hauling overburden trucks from the steam navy to the spoil dump, but steam navy operations had lately been suspended until the summer (*The Argus*, 30 July 1891 page 9).



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- No further mention has been found of a locomotive at Briseis until February 1898 but a Government Report produced in 1894 said that spoil removed by the steam navy was being sluiced away (*The Mineral Resources of Tasmania* by A Montgomery, November 1894).
- In February 1898, J Ditchburn advertised for sale a locomotive in Tasmania, “6 wheels coupled, saddle tank pattern, 12in cylinder, 20in stroke, 4ft 8½in gauge” together with 30 waggons and a steam navy. (*Sydney Morning Herald*, 28 February 1898 page 2). The locomotive was also advertised, by Henry Edgell of Launceston (in the *Launceston Examiner*, 24 March 1898, page 8), with its location given as Briseis mine.
- In February 1902, a locomotive with contractors’ wagons, and a Ruston & Proctor steam navy, were advertised for sale by Briseis Tin Mines Ltd, Derby (*Launceston Examiner*, 12 February 1902 page 7).

It is certainly the case that the identification of the Briseis locomotive as Manning Wardle 909 may be correct. An objective examination of viable possibilities among other locomotives of comparable size could well have shown that there are good odds of this being the case, and any evidence discovered in Tasmania could well settle the matter. However, the case put forward so far makes it no more than a viable theory that must be treated with appropriate caution, not the near certainty that the letter would have us believe.

John Browning
Annerley, Queensland

Briseis Tin Mining Company locomotive (LR 275 p. 26)

The letter from Ron Madden, “Briseis Tin Mining Company locomotive,” in LR 275 introduces an exciting new theory to explain a longtime mystery and I wish to add to the discussion.

The letter in LR 275 presents the hypothesis that the locomotive employed at the Briseis Tin Mine in Tasmania, from 1890 until about 1902, was Manning Wardle No 909. It concludes by expressing confidence that this hypothesis “will withstand the most thorough scrutiny.” I would like to respond to the implied invitation for scrutiny by offering an alternative hypothesis for the career of Manning Wardle No 909 and discussing an alternative hypothesis for the locomotive at Briseis.

The alternative hypothesis for Manning Wardle No 909 is prompted by the photograph above.¹ It shows a Manning Wardle K Class locomotive with a construction train on the first bridge over the Swansea Channel.

The Swansea Channel connects Lake Macquarie to the ocean. Channel training works were constructed there in order to allow for more reliable passage of shipping between the lake and the ocean. The bridge was constructed to facilitate the construction of the channel training work. The bridge had been erected by October of 1880.² The contractors were A and R Amos. The partnership between the brothers Alexander and Robert Amos was dissolved in 1889³ and Alexander Amos continued the job at Swansea.⁴ The works had apparently been completed as designed or had ground to a halt by mid 1892. There was a meeting of locals to request the restarting of the works.⁵ It was

stated that the locomotives (plural), wagons, and cranes were all still on site. By 1896, the Swansea Bridge had been converted from a rail bridge for the works to a road bridge for the public.⁶ The rails were removed from the metal drawbridge part and the deck of the timber part was filled with gravel.⁷ The four Manning Wardle K Class locomotives that came to New South Wales with the wrap-over cab roof as pictured were built in 1883 and 1884.⁸ These facts suggest that the locomotive in the photograph was working with Alexander Amos (possibly together with his brother) and that the photograph was taken between 1884 and about 1892.

The letter in LR 275 shows that Manning Wardle No 909 was with Alexander Amos at the time of his death. The question then arises as to whether this locomotive is the Manning Wardle K Class locomotive in the photograph at Swansea.

Evidence gleaned from newspapers indicates that the Swansea job was Amos’s last contracting job. He subsequently operated as a grazier. This supports the idea that Manning Wardle No 909 is the locomotive on the Swansea bridge.

The same argument applies to the other locomotive in Amos’s estate. The letter in LR 275 identifies it as Andrew Barclay No 167. Amos is retrospectively alleged to have had two locomotives on the Swansea job – a little locomotive, “Puffing Jinny,” with seven wagons and a bigger locomotive, “Green Frog,” with nine wagons.⁷ The presence of two locomotives in Amos’s estate is consistent with their both being with Amos on the Swansea contract.

The four Manning Wardle K Class locomotives that came to New South Wales

with the wrap-over cab roof are Manning Wardle Nos 909, 912, 918 and 919. No 912 was originally in the employ of the North Illawarra Coal Mining Co⁸ and went to the South Bulli Colliery.⁹ Nos 918 and 919 were built for the New South Wales Government Railways⁸ and remained with that organisation until 1902 and 1908 respectively.¹⁰ Unless one of the government locomotives somehow came to be on construction at Swansea, Manning Wardle No 909 is the only locomotive available to be the locomotive on the bridge.

If Manning Wardle No 909 was with Amos on the Swansea contract and remained with him until his death, then it could not have been with the North Illawarra Coal Mining Co in 1890 and at the Briseis Tin Mine from then until 1902 as claimed in the letter in LR 275.

Manning Wardle No 909 could well have been with Amos since new. It was ordered by the agent E A Levy.⁸ This agent is known to have ordered other locomotives for the Amos Brothers.

In summary, the alternative hypothesis for Manning Wardle No 909 is that it worked with Amos on the Swansea contract and not with the North Illawarra Coal Mining Co or subsequently at the Briseis Tin Mine.

The letter in LR 275 offers an alternative hypothesis for the locomotive at Briseis without any argument for its rejection. This alternative hypothesis is that the locomotive at Briseis was a Henry Vale “knock-off” of a Manning Wardle locomotive. No further detail is given in the letter. In spite of this, there is no secret in the fact that photographs exist of a locomotive at the Helensburgh Colliery that is badged as Henry Vale No

30 but looks like a Manning Wardle K or “Old I” Class locomotive.⁹ Less well known is the story that this locomotive came to the North Illawarra Coal Mining Co from the railway contractors Rowe and Smith.¹¹ If the story is true, then Henry Vale No 30 could be the locomotive that went to Briseis from the North Illawarra Coal Mining Co. Both alternative hypotheses need to be rejected before the hypothesis favoured in LR 275 can be afforded any confidence.

The hypothesis favoured in LR 275 suffers from a level of complexity that would fail any attack by Ockham’s razor. Some of the complexity stems from the ingenious claims required to make it appear feasible. These include:

- the North Illawarra Coal Mining Co had two identical Manning Wardle locomotives but the builder of one could not be identified because it had lost its builder’s plate
- the locomotive’s weight was confused with its piston stroke
- there is an “extraordinary coincidence” associated with the two locomotives that were in Amos’s estate
- the locomotive came to Amos after he had ceased contracting.

Neither alternative hypothesis requires such complex logic.

One factor that militates against the alternative hypothesis for the career of Manning Wardle No 909 is the length of the funnel on the locomotive in the photograph. The funnel appears to be longer than normal. Manning Wardle No 912 was pictured at the South Bulli Colliery with a shorter funnel.⁹ Nos 918 and 919 were

special adaptations of the standard Manning Wardle K Class⁸ and there are photographs of them sporting longer funnels similar to the one shown in the photograph of the Swansea Bridge.¹² I am not aware of any confirmed photograph of Manning Wardle No 909. It may have had a shorter funnel like No 912. The locomotive on the bridge may have been one of the New South Wales Government Railways locomotives, Manning Wardle Nos 918 and 919, on hire.

Photographs showing Manning Wardle No 909, or the lengths of the funnels on Manning Wardle K Class locomotives other than Nos 909, 912, 918, and 919 would be of great assistance. I would be most grateful if any reader can help in this regard.

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3. *Sydney Morning Herald*, 9th September, 1889, Page 2.
4. *Newcastle Morning Herald*, 16th May 1890, Page 1.
5. *Newcastle Morning Herald*, 3rd August, 1892, Page 7.
6. *Newcastle Morning Herald*, 30th March, 1896, Page 5.
7. *Newcastle Morning Herald*, 12th April, 1952, Page 5.
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9. McCarthy, K. A. (1983) *Gazetteer of Industrial Steam Locomotives Illawarra District NSW* Sydney, Australian Railways Historical Society.
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11. Eardley, G. H. (1953) *The North Illawarra Coal Mining Co ARHS Bulletin* 4(191,192).
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Jon Henry
via email

OBITUARY Peter L Charrett 1939–2020

We are very sorry to report the death of Peter Charrett on 7 October. Peter joined what was then the Victorian Light Railway Research Society in 1962 when the Society had 14 members. At that time he was working for the State Rivers & Water Supply Commission and a number of his articles about SR&WSC tramways were published in *Light Railways* Nos 10, 21, and 23. He was an LRRSA Committeeman in 1968-69, and the Editor of *Light Railways* Nos 26 and 27.

He was very active in other railway enthusiast organisations, including the Australian Railway Historical Society and at Puffing Billy. He had joined the Puffing Billy Preservation Society in 1961, and was still an active volunteer in the Booking Office up until the cessation of services due to COVID-19 in March this year. As a licensed surveyor

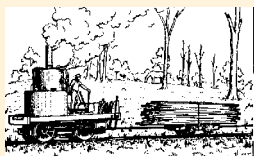
he was involved with survey work for the reconstruction of the Wright trestle bridges on the Gembrook restoration. He was the author of the book *Preserved Railway and Tramway Rolling Stock in Australia* published in 1977 by the Association of Railway Enthusiasts.



Gathered at the Puffing Billy Railway for Mike McCarthy’s ‘Driver Experience’ on 14 April 2012, are LRRSA identities (from left to right) Peter Charrett (former Secretary), Mike McCarthy (Vice-President), Bill Hanks (President), Frank Stamford (Publications Officer) and Phil Rickard (current Secretary).

In the 1990s he moved to Sydney and was then actively involved with the LRRSA NSW Division. He was Treasurer of that Division from 1995 to 1999, and Secretary/Treasurer from 2006 to 2009. During that time he regularly attended LRRSA meetings in Sydney, and made a number of presentations at the meetings. He was also active in the Illawarra Light Railway Museum Society at Albion Park.

In about 2009 he returned to Melbourne, and from that time he regularly attended the Society’s Melbourne meetings.



LRRSA NEWS

MEETINGS

LRRSA Zoom Meetings

The LRRSA will be holding regular virtual meetings via Zoom conferencing software on the dates below. Members wishing to "virtually" attend will need to pre-register via our website lrrsa.org.au. After registration, details of how to join the meeting will be provided to those that have registered.

December 2020 Members Zoom meeting

Date: Thursday 10 December at 8pm AEDT
John Browning will speak about the 2 ft gauge railways built on the Western Front in WW1 and the stories of the war service locomotives that found their way to Queensland after the war to haul sugar cane.

February 2021 Members Zoom meeting

Date: Thursday 11 February at 8pm AEDT
Mike McCarthy will tell the story of the locomotive worked 2 ft gauge Red Cliffs Light Railway that served the Red Cliffs pumping station in northern Victoria from 1924 to 1954.

Brisbane: "Meeting details to be advised"

At the time of writing, no details were available of whether the venue will be open for a meeting. If a meeting is held, details will be provided to members locally and on the Facebook page *Light Railways in Australia*.

SYDNEY: "No meeting"

As per the usual practice in NSW there will be no December meeting. The next meeting will be in February 2021.

Melbourne: "No meeting"

There will be no meetings in Melbourne until further notice.

Adelaide: "Meeting details to be advised"

There may be an Adelaide meeting in December - South Australian members will be advised by e-mail about a week before that date. This will depend on the rules at the time.

Location:

1 Kindergarten Drive, Hawthorndene

Date: To be advised



Book Review

In the Shadow of the Prom Early South Gippsland Times, Tales and Tramlines

by Mike McCarthy

Published July 2020 by LRRSA. Hard cover, 286 pages, A4 size 212 photographs, 64 maps, plans and diagrams, with glossary, bibliography, references, and index. Available from the LRRSA online bookshop -\$66.00 plus postage (\$49.50 plus postage for LRRSA members).

I have to confess that before I read this book, I knew where Wilsons Promontory was but knew next to nothing about it or the South Gippsland coastal district nestling in its shadow. But after immersing myself in this richly detailed history, into which Mike McCarthy has cleverly interwoven so many stories of pioneer hopes, dreams, triumphs and failures, I almost felt that I could lay claim to be something of an expert. Or at least, I could hold my own in a conversation on the subject.

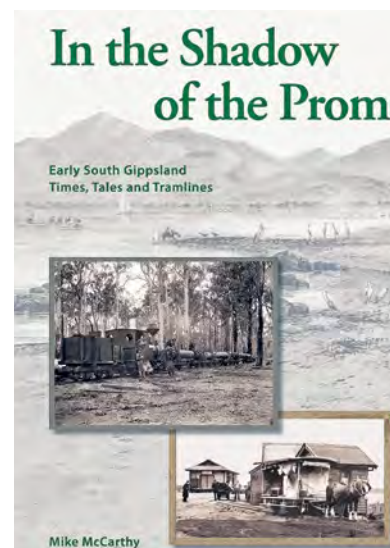
In the Shadow of the Prom is an impressive publication, printed on high-quality paper, copiously illustrated with photographs, maps and diagrams, and is comprehensively referenced and indexed.

The many photographs represent every phase of the district's history and have been crisply reproduced in attractive sepia tones. A key selection of the larger images has been digitally tinted by the author using state-of-the-art software and the colours of local vegetation, earth and seascapes to add authenticity. Twenty-first century technology in the form of camera drone photography has been employed to capture birds-eye views of relic locations and old tramway routes.

The extensive map collection deserves a special mention. All the maps are multi-coloured and have been crafted by the author to clearly identify the many localities described in the text and to illustrate the wealth of detail supplied. Individual maps are crisply reproduced, contain excellent descriptive text, and are not cluttered with irrelevant detail. They form an essential supplement to the text and readers unfamiliar with the area will find themselves referring to them many times over.

The setting for Mike's book is the South Gippsland coastal district that shelters beside Wilsons Promontory, a large rocky peninsula that juts into Bass Strait and forms the southernmost tip of Victoria. The area was rich in natural resources with fertile soils, forested ranges clothed in prized Blue Gum and Yellow Stringybark hardwoods, and productive fishing grounds offshore. There was also a little tin and gold to be mined.

Access was difficult. Swamps, ranges and a complete absence of roads severely hindered early overland travel. Shallow inshore waters barred ships from the coast except where a few narrow channels, the ancient courses of drowned rivers, gave access to barely-navigable rivers and creeks. Here the first ports and settlements developed. Wooden-railed horse tramways extended inland to pioneer sawmills and brought out their timber. Shallow-draught coasting vessels serviced the ports, bringing in passengers, goods and machinery, and taking out produce, timber and fish.



The extension of the Great Southern Railway into South Gippsland saw the introduction of iron-railed steam tramways. They were built by railway contractors to move construction material from port to railhead, and ballast from quarries to lineside. Influential land-owners jostled for pre-eminence and sought to take advantage of the new railway. Properties were sub-divided into paper townships, and the Government was lobbied hard to site railway stations within their boundaries. The fortunes of the townships that grew, those that withered on the vine, and the men who championed them, are entertainingly detailed in the book.

The various tramways that linked the small ports to the hinterland and the Great Southern Railway form a backdrop for a large number of interesting stories that the author has collected. One of the many anecdotes to enjoy concerns Alexander Pinkerton's decrepit Stockyard Creek horse tramway between The Landing and the early gold-mining town of Foster. Pinkerton

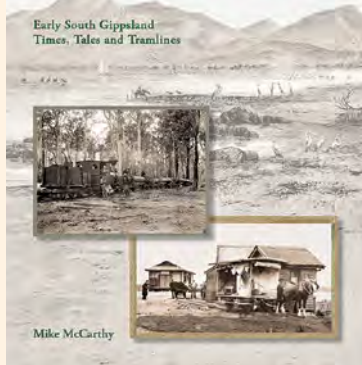
enjoyed a monopoly, charged high prices and scandalously neglected his tramway. The 4 km journey in crude goods trolleys to Foster was so bone-rattling and so potentially dangerous, that passengers often chose to walk instead. They walked precariously along the tops of the slippery wooden rails, often in pairs on parallel rails with their arms linked together to keep their balance. In winter, a miss-step could land them in mud up to their knees, or worse. One of the more endearing stories centres around Port Welshpool. It was the Government's preferred location for a deep-water port and it was provided with a substantial jetty and a narrow-gauge horse tramway linking it to the Great Southern Railway. The tramway was operated by the redoubtable Walter Mansell, the Victorian Railways one and only horse tram driver. He held this position for over 25 years, hauling goods, fish and passengers over the 5 km line. Walter provided an excellent service, and as the author records in the book; "The community of Port Welshpool and the fishing industry were totally dependent upon him and he made certain that the service provided extended well beyond that decreed by a sheet pasted to

the Welshpool station wall." Walter was also very independent and did not hesitate to express his views and requirements to visiting railway commissioners who developed quite a tolerant regard for him. This did not sit well with Welshpool station masters to whom he technically reported. Another story has overtones of a forensic criminal investigation into an old cold case. The 'crime scene' was the substantially-built Goodwood timber tramway that linked Port Albert to extensive Yellow Stringybark stands in the Mullungdung State Forest. An Orenstein & Koppel and two Krauss narrow-gauge steam locomotives were worked hard on the extensive log and sawn timber outlet lines. A Krauss locomotive's (*Mona's*) boiler exploded, killing the unfortunate driver. The cause was never satisfactorily explained at the time. The author's investigation reveals the probable cause and also the possibility that incriminating evidence was removed from the scene before the arrival of officialdom. No overview of the various South Gippsland tramways would be complete without mention of the shambolic Fish Creek Gravel Tramway. It was a rail-tractor line built to convey quarried gravel for early road construction by the County Roads Board.

It was so poorly-equipped, so desperately under-funded and so neglected by its owner that it would have to qualify at the bottom of any conceivable ranking of tramways. The final chapter is titled 'Remains and Relics.' It contains an excellent suite of the author's colour photographs, taken from land and air, showing the remains of the early pioneers hopes and dreams. One of the more poignant images shows a cluster of white lilies growing at William Davies' old sawmill site near Foster. They are the descendants of those originally planted by Davies' companion Phoebe who died at a young age from pneumonia, probably brought on by the damp and cold conditions prevailing in the valley. Tragically, there was no funeral as Davies did not know of her death until several weeks later. The only possible criticism that might be offered concerns the small font used for the main text. A larger font could benefit readers with less than 20/20 vision and those who rely on strong prescription spectacles. Nevertheless, this is an impressive book, a labour of love and the product of some 40 years of research and detailed field work by a dedicated author. Highly recommended.

Ian McNeil

In the Shadow of the Prom



The LRRSA is pleased to announce: *In the Shadow of the Prom*

Early South Gippsland: Times, Tales and Tramlines

By Mike McCarthy — Published by the LRRSA

Hard cover, 285 pages, A4 size, 212 photographs, 64 maps plans and diagrams, bibliography, references, and index.

In the Shadow of the Prom is a history of the early settlement of south Gippsland from Foster to the Mullungdung forest north-east of Port Albert. The development of the towns and the importance of coastal shipping to their survival is comprehensively covered. It includes details of numerous tramways which provided transport from the coast before the coming of the South Gippsland Railway.

The 2 ft gauge steam operated Goodwood tramway from Port Albert is covered in detail, as is the 2 ft 6 in gauge Victorian Railways Port Welshpool line. The illustrations, including photographs, maps and diagrams are some of the best to be produced so far in an LRRSA publication

The recommended retail price is **\$66.00** (\$49.50 for LRRSA members) plus postage \$15.00.

Now available ...

Beneath the Peak of Lyell

The Mount Lyell mines and their 2 ft gauge tramways

By Ross Mainwaring — Published by the LRRSA

Hard cover, 263 pages, A4 size, 228 photographs, 35 maps plans and diagrams, glossary, bibliography, references, and index.

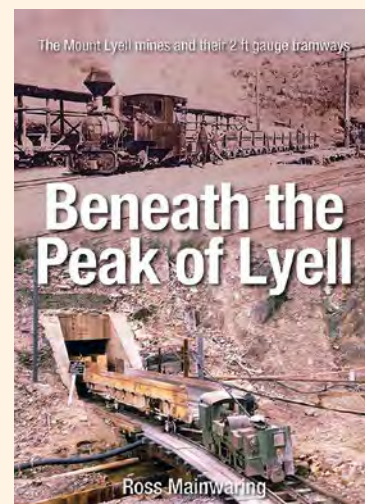
Beneath the Peak of Lyell is a comprehensive history of the copper mines of the Mount Lyell area around Queenstown, Tasmania; and the associated 2 ft gauge tramways.

It covers the life of the various mines from the beginning around 1890, and the way the extensive series of 2 ft gauge tramways were essential to their success. Motive power included horse, steam, electric, battery-electric, and internal-combustion, as well as cable haulage.

The recommended retail price is **\$66.00** (\$49.50 for LRRSA members) plus postage \$15.00.

Details and Online orders: <https://shop.lrrsa.org.au/>

Or by Mail: LRRSA Sales P.O. Box 21, Surrey Hills, Vic 3127.





Heritage & Tourist NEWS

News items should be sent to heritagetourist@lrrsa.org.au Digital photographs for possible inclusion should be sent direct to Richard Warwick at editor@lrrsa.org.au including the name of the location, the name of the photographer and the date of the photograph.

QUEENSLAND

NAMBOUR TRAMWAY COMPANY LTD.

610mm gauge

EM Baldwin 0-6-0DH *Petrie* (6/2300.1 6.68 of 1968) was moved from Nambour Museum to the newly-completed Nambour Tramway depot in April. It had been housed at the museum since being donated to the tramway project by Bundaberg Sugar in 2013.

Extensive track work was under way in mid-August installing pointwork in Mill Street to connect the old mill tramway track to the various roads into the tramway depot.

John Browning

THE GINGER FACTORY, Yandina

610mm gauge

After a period out of use undergoing repairs earlier in the year, Krauss 0-6-0WT 1901 *Moreton* (4687 of 1901) was back at work on its circuit of track in August. The train is powered by a diesel engine in the tender, which appears to have been constructed on a modified Innisfail Tramway bogie.

John Browning

MACKAY REGIONAL COUNCIL, Mirani Museum

610mm gauge

On display at the museum is ex-North Eton Mill's EM Baldwin 4wDM *Allandale* (4/473 3.63 of 1963) together with two steel cane trucks, one with wooden stanchions.

John Browning

PETER McFARLANE, Septimus

610mm gauge

In a line up of preserved machinery outside this property, is a steel cane truck, painted blue, presumably originating from North Eton Mill.

John Browning

PROSERPINE MUSEUM, Proserpine

610mm & 457mm gauge

Hunslet 4-6-0T 1317 of 1918 is displayed inside the museum, painted overall green. Also displayed is a

timber cane truck, numbered 468, in a very good state of preservation.

There is a separate display on the Dittmer gold mine that features a rake of loaded 1ft 6in gauge end-tipping ore trucks.

John Browning

BURDEKIN MACHINERY PRESERVATIONISTS INC., Brandon

1067mm & 610mm gauge

Hunslet 0-4-2T *Pioneer* (642 of 1896) is displayed in a cage-like structure adjacent to the Bruce Highway with a Pioneer Mill cane truck. Unfortunately, the description board displays the incorrect builder's number. The locomotive

is on loan from members of the Phillips family. Hunslet 0-6-0T *Inkerman No.1* (1119 of 1913) is stored on site in unrestored condition. It was donated by local private owners in 2017. The nameplates of both locos and a Hunslet 1119 builder's plate are displayed inside the museum building. Part of the chassis of 0-4-0ST Andrew Barclay 268 of 1883, as converted at Pioneer Mill as a mill roller transporter, is also on site. The 2ft gauge Mitsubishi van conversion line car by Ferguson's Engineering Works, Giru, ex Invicta Mill, is under restoration, with a replacement body being fitted. The old body lies discarded on its roof alongside.

John Browning



Extensive track work was under way in mid-August installing point work in Mill Street Nambour to connect the old mill tramway track to the various roads into the tramway depot. Photo: John Browning



Hunslet 4-6-0T 1317 of 1918 is displayed inside the Proserpine Museum painted overall green. Photo: John Browning

HINCHINBROOK SHIRE COUNCIL, TYTO Precinct, Ingham

610mm gauge

On display in this parkland area and cultural precinct are four old four wheel 4-tonne cane bins on a length of track, and a separately plinthed CSR steel cane truck. An interpretation board for the cane truck quotes a 1932 description of a cane cutter's job, "a good occupation for a man with the hide of a rhinoceros, the strength of a bull, and the agility of a monkey".

John Browning

AVONSIDE WORKS 0-4-0T, Mackay

610 mm gauge

A 1922-built former sugar cane engine will be repatriated to the UK and restored for its centenary. It will be going to the Bala Lake Railway in Wales. Purchased by an unnamed BLR volunteer and expected to arrive at the line in October, Avonside Works 0-4-0T, No. 1909 of 1922, spent the entirety of its career working on the sugar cane plantations at Farleigh Mill in the Mackay Region of north east Queensland. Retired in the 1960s, it was subsequently plinthed in a park near Farleigh Mill before being purchased by Eric Gibson, who removed it and stored it in a shed on his farm near Mackay where it has remained in an unrestored state ever since. It is understood that the new owner's intention is to have the locomotive up and running in time for its centenary. Obtaining an export licence from the Australian government initially proved difficult and failed at the first attempt, but was eventually given, which meant the locomotive could be exported back to its origins.

Steam Railway September 2020

FRIENDS OF ARCHER PARK STATION AND STEAM MUSEUM INC. Rockhampton

1067 mm gauge

The Museum is still operating under the COVID-19 Tourism and Accommodation Industry Plan which means that it can still only have 50 persons in the museum at one time, including volunteers. Staff are legally obliged to try to remind all visitors and volunteers that they must physical distance and hand sanitise.

Volunteers are still waiting for the Billard to return after its gearbox repairs. QR Maintenance staff are coming to measure the flanges on both the steam tram and Billard loco tractor to ensure that they are fit for purpose.

Tram Tracks: Volume 14 Number 7 October 20201

DURUNDUR RAILWAY, Woodford

610 mm gauge

COVID-19 continues to be unpredictable in its affects on ANGRMS, however, a restart on 20 September foreshadowed in July was no longer possible and management is currently looking at a date later in the year. While they are not running public trains, work on the railway continues on the track, rollingstock, and general maintenance, plus significant amounts of paperwork. The work on installing the two sets of points at Peterson Road is taking longer than expected with work continuing throughout September. Other important work on the mainline in this area will now be taking place throughout October.

There has been substantial progress on the track work for the future Peterson Road Station and connection to the level crossing for the future extension in the past months. After months of

work at Margaret Street, the fabrication of the two sets of points on the flat wagons has been completed. The points were transported to Peterson Road on Saturday, 1 August 2020. The following Saturday the railway called on the services of a professional backhoe operator.

Completion of this work is one of the prerequisites for the recommencement of passenger operations, and while good progress has been made, there is still much to do. Once that work is completed volunteers can return to work on the new mainline and the passing loop for the future Patterson Road station.

Durundur Railway Bulletin 41: 365 September/October 2020

NEW SOUTH WALES

ZIG ZAG RAILWAY, Clarence

1067 mm gauge

This railway is on track for a full recovery now that all the debris from this year's Gossops Mountain fires has been safely cleared.

Lithgow Mercury online news 15/8/2020

PETE'S HOBBY RAILWAY, Junee

610 mm gauge

Pete's Hobby Railway recently announced that Timbertown, Wauchope, was the successful applicant for purchase of PHR's Perry steam locomotive. Under the provisions of the Expression of Interest, Timbertown has exercised its option to also acquire the Hudswell Clarke bogie tender. Accordingly, the locomotive (and tender) will remain in Australia.

PHR had announced the calling of Expressions



Perry 0-6-2T locomotive (ex Kalamia Mill's Chiverton) Serial No. 6771.38.1 of 1938 and Fowler tender (originally from a CSR sugar mill Hudswell Clarke), which have been purchased by Timbertown at Wauchope, taken at Pete's Hobby Railway on 16 October 2020. Photo: Peter Neve



Hunslet Torpedo 1187/1915 on the newly constructed turntable. Peter Neve is standing at the front of the locomotive while Josh (in cab) and his father, Phil Burke who were responsible for the design and construction of the turntable and pit stand at the rear on 5 September 2020. Photo: Peter Neve Collection

of Interest on 23 April for the disposal of the 2-ft gauge 0-6-2T steam locomotive built in 1938 by the Perry Engineering Co., of South Australia, serial number 6771.38.1. Formerly working at the Kalamia Sugar Mill in North Queensland as *Chiverton*, and after being on static display in a local park for some years, the locomotive was purchased in 1975. A number of parts disappeared either before placement in the park or during its time there.

Of the nineteen 2-ft gauge locomotives constructed by Perry, 13 were of the 0-6-2T wheel arrangement and six were 0-4-2T wheel arrangement. All but three are understood to be still in existence in museums or privately owned. This locomotive is the second oldest to be built, in 1938. The oldest, dating to 1934, is also in private preservation. Another is currently in operating condition at the Lake Macquarie Light Railway at Toronto NSW (plus another, intact, but not currently operational), while another fully restored locomotive is located at the Illawarra Light Railway Museum, Albion Park NSW. This latter locomotive is currently undergoing commercial boiler repairs financed under a Transport Heritage NSW grant.

Chiverton is not in operating condition and will require considerable works to make it so. It is no longer fitted with its original side tanks and these are not available. There are no cab fittings, pressure or water gauges, wash-out plugs, steam turbo-generator or injectors fitted to the locomotive. While the boiler is

understood to be repairable, but requiring a total re tube, no guarantees in this regard were given by PHR in the EOI brochure and prospective bidders had been advised to satisfy themselves in this regard. An original builder's plate from the locomotive is included in the sale, as is the original headlight casing, including glass.

Under the terms of the Expressions of Interest, Timbertown had the first refusal on a separately offered bogie tender originally used behind PHR's Fowler-built locomotive *Perth*, originally from the Colonial Sugar Refining Co.'s Victoria Mill in North Queensland. The tender, which also is in poor condition, has no direct link to the Perry locomotive, but could be rebuilt to allow the Perry to operate as a tender-type engine rather than its originally constructed tank type. Timbertown has exercised this option to acquire the tender.

As a part of a future restoration project, the locomotive (and tender) will need to be modified to operate over Timbertown's 595mm gauge track. Expressions of Interest had been received from around Australia as well as the United Kingdom. In addition to the EOI being promoted directly by way of the PHR web page and various specialist narrow gauge Facebook pages, the proposed sale received coverage in *Light Railways* and the UK-based *Narrow Gauge World* magazine, the latter giving the EOI world-wide exposure. Moneys received from the sale of *Chiverton* will be allocated towards the completion of the restoration to working order of *Perth*, PHR's

1900 vintage 0-6-0T Fowler steam locomotive.

On 28 August the Railway took delivery of its first bogie vehicle, an open goods wagon which last saw service many years ago on the Innisfail Tramway in North Queensland. It is one of approximately 110 built between 1900 and 1953. Known as H-type open goods wagons because of their similarity to the H-type open goods wagons of the Queensland Railways 3 ft 6 in gauge system, the first eleven initially saw service with the Geraldton Shire Council back in 1900. In the years following the take-over of the Council's 2 ft gauge line in July 1914, eventually forming QR's Innisfail Tramway, the numbers gradually increased, until the nominal figure of 110 was reached in 1953. The wagons formed a fleet used to convey bagged sugar from the surrounding mills to Mourilyan Harbour for shipping. In 1960, the sides were removed to allow the fitting of single bulk sugar containers. However, in 1997, rail haulage to the harbour ceased, resulting in the wagons falling into disuse. The wagons have a length over body of 20-ft (6.1m), a width of 5-ft 9-inches (1.75m), a tare weight of 4-tons (4.08 tonnes) and a gross weight of 12-tons (12.25 tonnes). PHR's vehicle carries no identification, so it is not possible to determine its road number on the Innisfail Tramway. Pete assumes that it is one of the later variety built between 1916 and 1953, as it is fitted with bogies bearing QGR stamped axle lubrication plates. The vehicle was fitted with a hand-brake, operated from one side only.

Locomotives and rolling stock built for the Geraldton Shire Council (and later for the Innisfail Tramway) have a coupling height higher than the normal cane fields location below the buffing plate. Because of the height of the coupler, the vehicle can only be moved using the Ruston diesel. Interestingly, PHR's Fowler locomotive *Perth* has provision for this higher coupling as well as its normal cane fields height coupler, even though vehicles with this higher coupler never operated on the 2 ft gauge at CSR's Victoria Sugar Mill where *Perth* operated for the whole of its working life. This, together with builder's number stamped on the main frame above the axle journals, strongly suggests that the frame currently under *Perth* originated from an identical Fowler locomotive previously used by Geraldton Shire Council.

Progress Reports 58, 59 and 60 August/September 2020

VICTORIA

PUFFING BILLY RAILWAY, Belgrave

762 mm gauge

As of Wednesday 5 August 2020, directions from the Public Health Commander came into force and, as PBR falls under the scenic and sightseeing transport sector, the railway was directed to close all onsite work. Actions were taken to prohibit workforce access to all PBR sites, except for a limited number of workers who may be required to attend to emergencies. The directions outline emergencies for access including works for purposes of critical maintenance, safety and meeting environmental obligations. Any access in an emergency will require a worker permit to do so and is subject to meeting the requirements of the Railway's COVID Safe Plan.

Railway management and the Board are continuously monitoring restrictions, and liaising with authorities and industry partners to establish a potential date for resuming services. On 25 September 2020, the Emerald Tourist Railway Board resolved to proceed with a trial for the return to sitting on the sills when restrictions permit, subject to the Office of the National Rail Safety Regulator being satisfied that the railway has adequately addressed all their points of clarification.

The return has required extensive investigations and a comprehensive review of the risks associated with sitting on sills. As a result, several measures have been accepted to mitigate the risks associated with sitting on the sills, including:

- Installing boom gates at identified high-risk level crossings and ongoing monitoring of the balance of level crossings;
- Physical modification of sills and railing on carriages;
- New signage, passenger information and instructive announcements;
- Introduction of new height requirements for passengers sitting on sills and supervision;
- New elements of training for the PB workforce to instruct and supervise passengers sitting on sills;

- New elements of carriage maintenance associated with sills and rails; and new procedures and equipment to check and maintain a trackside clearance envelope for passengers on sills.

The Railway's biggest project, the Lakeside Visitor Centre, is still progressing even under the COVID-19 restrictions, and of course working under a strict High Risk COVID Safe Plan. Unfortunately, even though builders have been able to conduct some works, the restrictions have also affected the project as it has not been possible to have more than nine builders on site at any time.

Some of the PB team have been out conducting critical works along the corridor including clearing trees after the storms and undertaking bushfire preventative maintenance with the Fire Season looming. It took almost a full day on trolleys to clear the track from Belgrave to Gembrook and while doing this, workers also undertook a quick inspection of the corridor and found various trees that needed lopping. Workers have also completed a herbicide run on part of the track to assist in weed reduction to make it easier for a thorough track inspection to be undertaken when train running starts.

Monthly News October 2020 Number 567

WALHALLA GOLDFIELDS RAILWAY, Walhalla

762 mm gauge

The railway is looking at re-opening in December for the holiday period. If the virus situation permits, the railway will begin with the Winter timetable in the early part of December. From Boxing Day onwards management would like to run the normal holiday three trains per day, every day of the week timetable.

Following the latest Government update, inquiries have been made to DHHS and other government agencies and it would appear that WGR is still unable to open until at least late November or early December at this stage.

Approaches have been made to the State and Federal Governments for assistance and it is hoped some positive results will be forthcoming, however this railway is one amongst many organisations seeking financial help.

Some of the railway's dedicated crew have been working on the railway, keeping it clear of fallen trees and weeds, while in the background, work continues on the railmotor.

TASMANIA

IDA BAY RAILWAY, Lune River

610 mm gauge

There is no further news to report re the Ida Bay Railway; as per the previous report the group planning on running the railway in the future is still waiting for the government to send a revised licence agreement draft.

James Shugg

REDWATER CREEK RAILWAY, Sheffield

610 mm gauge

At Redwater Creek in Sheffield, the composite Krauss loco (B/n 5800/5682 of 1907) was running services, and noted in the workshops was the ex Ida Bay Hunslet (B/n 1844 of 1936), disassembled. James was told that the loco is essentially ready to be reassembled, but completion would depend upon finding manpower for the task, which was holding things up.



At Redwater Creek in Sheffield, on 4 October the composite Krauss loco (B/n 5800/5682 of 1907) was running services, and noted in the workshops was the ex Ida Bay Hunslet (B/n 1844 of 1936), disassembled. The photographer was told that the loco is essentially ready to be reassembled, but completion would depend upon finding manpower for the task, and that was holding things up. Photo: James Shugg



Wee Georgie Wood (John Fowler B/n 16203 of 1924) ran six trips at Tullah for about 50 passengers on Sunday 4 October, its first running day in 7 months. Also, here was Romeo, the ex Lake Margaret 4wPM (Nicola Romeo B/n 770 of 1925), shunting in the workshop area. Photo: James Shugg

Meanwhile, a passing loop was under construction to allow two trains to operate at the same time, which is the plan for the Steamfest weekend next March, COVID permitting. Steamfest in March 2020 saw 8000 visitors over the three-day weekend; the annual event funds the operation of the railway over the rest of the year.

James Shugg, site visit

WEE GEORGIE WOOD RAILWAY, Tullah

610 mm gauge

At Tullah, *Wee Georgie Wood* (John Fowler B/n 16203 of 1924) ran six trips for about 50 passengers on Sunday October 4, its first running day in seven months. *Romeo*, the ex Lake Margaret 4wPM (Nicola Romeo B/n 770 of 1925) was shunting in the workshop area. This loco has been fitted with a six-cylinder Dodge petrol engine, but still has the original two speed transmission. Following recent bearing work in the driveline, *Romeo* has been running smoothly. These locomotives will celebrate their 100th birthdays in 2024 and 2025 respectively. Also on site at Tullah are three limestone trolleys from the Ida Bay Railway, perhaps the only intact examples left anywhere of these wagons, which feature a unique inertia braking system.

James Shugg, site visit



Also at Tullah on 4 October were three limestone trolleys from the Ida Bay Railway, perhaps the only intact examples left anywhere of these wagons, which feature a unique inertia braking system. Photo: James Shugg



Above: An EM Baldwin built diesel-hydraulic loco, No.19, hauling an empty rake of 38 Differential 10-ton capacity bogie mine cars at Al&S Nebo Colliery (Wollongong, NSW) on 17 March 1993. Two re-railing jacks are prominently attached to the front of the commodious cab. The inordinate length of the Willison semi-automatic coupling shank is obvious. Barely visible is steam issuing across the grass from the scrubber box, in which water cooled and purified the diesel engine exhaust gases. This 42-inch gauge bogie locomotive, weighing 40 tonnes, was originally built in 1978 for Al&S Corrimall Colliery with its vicious 1 in 11.5 grade underground. It was fitted with a 375hp Caterpillar diesel engine driving a Niigata transmission. Loco length was 7.9 metres and width 1.9 metres. Pneumatic dump brakes were fitted at Nebo for additional safety when hauling heavy loads. Photo: Late Ray Graf collection

Below: A 25-ton Malcolm Moore Pty Ltd built diesel locomotive (number 6) standing near the Bradford Breaker at Al&S Nebo Colliery in October 1992. A total of 16 of these 0-6-0 204 bhp, 42-inch gauge locos were built from 1948 to 1951 for the Al&S South Coast collieries near Wollongong, utilising power plants supplied by the Drewry Car Company. They had a top speed of 14 mph and could operate in tandem through an electro-pneumatic gear changing device. Coupled to bogie 10-ton mine cars, they would convey up to 3000 tons per shift to the rotary dump on the surface. In this view, the water on the pavement is dripping from the exhaust scrubber box, which cooled the hot gases from the diesel engine. Photo: Late Ray Graf collection

