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LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways

Light Railway Research Society of Australia Inc.

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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 (sawn timber)	0.00236 cubic metre

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No 279 June 2021

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Editorial

Without question, the wonderful work of our authors, researchers and other contributors, year in and year out, has seen *Light Railway*s and the books published by the LRRSA go from strength to strength. Undeniably, the Society is enjoying wonderful success, and this is reflected in our membership growth and involvement with online presentations and our Facebook page.

It is important, however, to understand that, behind the scenes, much work is focused on ensuring that the Society remains in a position to continue this momentum. The complementary skills of our Council and others that support our publications are wonderful to see and, in total, place the LRRSA in a strong position to go forward. It all seems extraordinarily strong and, indeed, it is, but beneath it all is huge risk that must be addressed.

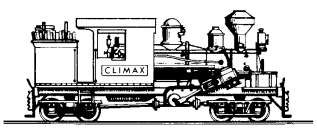
The core group that manages the LRRSA has been there a long time and are not getting younger! We need more of you to get involved. The Society has invested in change to help with this. Our Council meetings are now conducted on-line using Zoom, we have invested in a very capable membership system that can be managed from anywhere and we have engaged in outside book and magazine publication designers to reduce reliance on Council members. In short, we have taken steps to open ourselves up to a broader world to enable others to become involved and take the Society and what it does into the future. No longer are we, by necessity, anchored in Melbourne.

We need help going forward. In the immediate future, we need someone to fill a vacancy on the Council, and there will be other vacancies at some point as well. If they are not filled then all that we have enjoyed in our magazine, books, presentations, and Facebook will come to an end.

The ball is in your court, if you think that you can help in the Society's management, please put your hand up! You can show your interest by emailing to admin@lrrsa.org.au

Mike McCarthy

Front Cover: *On 11 March 2018, Rob Astley visited Pete's Hobby Railway, near Junee, NSW, and found the beautifully restored locomotive* Torpedo *in steam as part of the Junee Rhythm n Rail Festival.* Torpedo*, a 2 ft-gauge 0-4-2T, was built by the Hunslet Engine Company Ltd, Leeds, England in 1915, builders number 1187. The locomotive originally worked at the Inkerman Sugar Mill, Home Hill, Queensland from its inception until the early 1960s, when it was 'stuffed and mounted' in a park at Bowen. In 1975 it was obtained by Peter Neve OAM and restoration work started. In 2015 Peter moved to a property at Junee and built his own private railway. If readers wish to know more, Peter regularly updates* Light Railways*' readers in the Heritage & Tourism columns. You may also visit the interesting PHR website at www.peteshobbyrailway.club Photo: Rob Astley*



Light Railway Research Society of Australia Inc. A14384U
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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.

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.

A view of the extent of the landslide looking towards Belgrave. In the middle distance to the far left can be seen the water tanks.
Photo: PBPS archives courtesy John Thompson

LEFT BEHIND

2ft 6in trucks and the 1953 'Puffing Billy' landslide

by Peter Medlin, with assistance from Ted Godwin

On Monday 3 August 1953, sometime after the passing of the Up Mixed train ex Gembrook, destined for Upper Ferntree Gully, a large landslide occurred on the Victorian Railways' Gembrook narrow gauge line just beyond the locomotive water tank, between Selby and Menzies Creek. The landslide was at least the fifth time it had occurred at that location since the railway's opening and with low goods traffic and little passenger traffic beyond Belgrave, the railways eventually chose to close the line. The last landslide prior to this was in December 1952, with work to re-open the line continuing well into January 1953.[1]

Some work was carried out to clear the latest landslide (on 6, 7, 10-13 August), enough to allow a train to reach Emerald on Thursday 13 August 1953. On this day the daily works train picked up a truck of coke at Belgrave and took it through to Emerald. On the regular train days, Mondays and Thursdays, the works train also took ordinary goods loading to Belgrave. It is believed that the loco then pushed the works train, with labourers, to the landslide site.

Following the running of the Up Goods ex Emerald on the 13th, the creeping landslide again covered the railway. Works continued on Friday 14th, and all the following week.[2] The last such works train was on Monday 24 August when three more trucks were left at Belgrave.[3] All the works trains were hauled by locomotive 8A with driver Arthur Bridson and fireman Ian Barkla except that on Friday 14 August which was run by a North Melbourne loco depot crew. Following the running of the train on the 24th the VR ceased all landslide clearance works and suspended service on the entire line.

Despite requests from locals to at least run passenger trains from Upper Ferntree Gully to Belgrave – the section with the most intense patronage,[5] the entire line through to Gembrook remained idle until official closure on Friday 30 April the following year. It was the strong belief of many 'Hills' residents that the landslide was a blessing in disguise for the railways department who had wanted to close the line for over twenty years. On Wednesday, 13 October 1954, five-and-a-half months after official closure, 3A was lit up and hauled 2 NBC 'bona'† (loco and van) to Belgrave to pick up 18 NQ, 78 NQ, 82 NQ, 93 NQ, 14 NU and two other NQ trucks that had remained there since August 1953, and returned them to Upper Ferntree Gully.[6 7]

Stranded beyond the landslide, there were nine trucks.[8] With no further plans to clear the landslide, these trucks were isolated and had little chance of being returned to Upper Ferntree Gully. Of these nine 'trapped' trucks, two were at Emerald – 146 and 163 NQ, three were at Cockatoo – 209, 211 NQ and 13 NU, with four – 26, 29, 110 and 164 NQ at Gembrook. In October 1954 these were written off and tenders to purchase these trucks were advertised by the Victorian Railways. Rolling stock at Upper Ferntree Gully and Belgrave was also recommended to be sold for scrap.[9]

The four NQ's (26, 29, 110 and 164) at Gembrook were obtained by the Forests Commission of Victoria (FCV). They would be trucked by road to Erica for further use at the State Sawmill, together with another six trucks obtained from the Walhalla line.

† BONA is the Victorian Railways' telegraph code for 'Engine with Brake-van for guard's accommodation etc'; thus leading to the use of 'bona', as a word, in the Victorian railwayman's lexicon to describe any such train working.

The two NQ trucks (209, 211) and 13 NU at Cockatoo were sold to contractor J & C Johnson Brothers of Preston in 1955 for scrapping.[10] An approach to the contractor by the Puffing Billy Preservation Society (PBPS) to obtain the three trucks was only successful in obtaining 13 NU, with the two NQs being cut up on site.

At Emerald details are not clear as to the successful tenderer. The NQs 146 and 163 were still in the Emerald yard on rails in June, 1954 but by Sunday 25 September 1955, 163 NQ was no longer located in the Emerald yard. It had been pushed by persons unknown down the track towards Clematis, where it derailed on the level crossing at Pinnocks Road. This was probably due to stones from the road covering the rails, and it stopped on the Clematis side, clear of the crossing.[11] Subsequently, another group re-railed 163 NQ at Pinnocks Road and gravitated it to Clematis and placed it in the siding.[12] At a later date, yet another group of unknown persons pushed it towards Menzies Creek. It finally derailed and ended up near the Main Road level crossing at Clematis, where it remained until the VR cut it up in August, 1957.

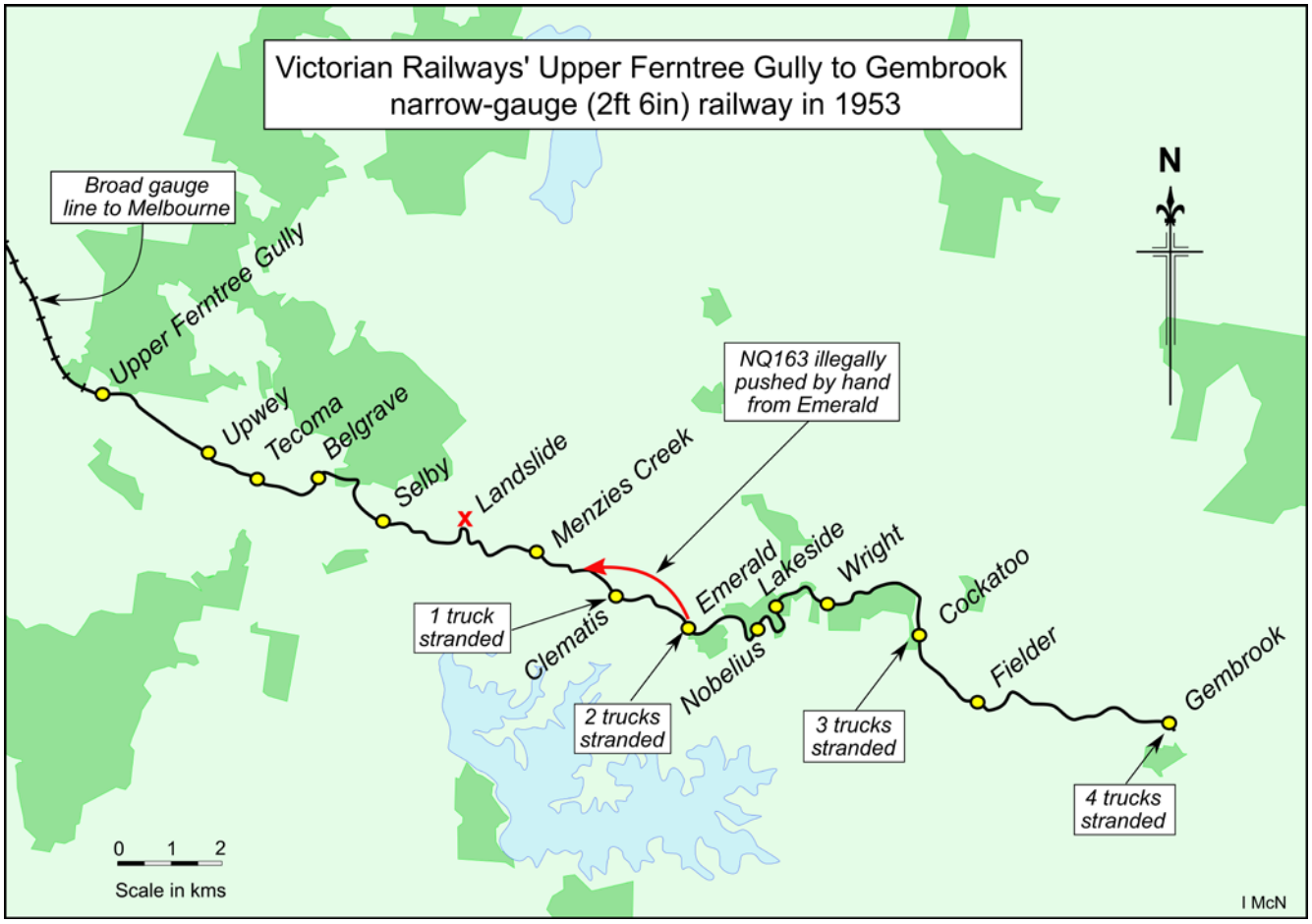
Following 163 NQ's unlawful removal from Emerald, the VR hauled 146 NQ off rails and up the earthen bank at Emerald station to the area that now forms the playground bordering on Kilvington Drive, Puffing Billy Place and the Emerald (Puffing Billy Railway) Carriage Workshops. At Cockatoo the VR also

The Tanks. *On the eastern flank of Black Hill (1215ft), near the source of Muddy Creek (a tributary of Cardinia Creek) and just over a mile past Selby station, and a similar distance before Aura, a spring was tapped to supply water for engine requirements. Over the years a variety of water tanks made their appearance here – the earliest photos show four ships' tanks, thus accounting for the plurality in the location's name. Within the first ten years these square tanks were superseded by the tall riveted cylindrical tank – seen above. By the mid-1930s a more squat, corrugated tank appeared, to be replaced in the late 1940s by another plain tank, wider and shorter than the first version. The steep nature of the hillside, then part of Glen Park estate, is clear. One suspects that deforestation and cultivation played a part in the continual land slippage in the cutting at the far right of our image. Here we see 11A, built by the VR's Newport Workshops in late 1911, and very early in its career, taking water at The Tanks with a Gembrook-bound train. Photo: Robert Law; courtesy Royal Historical Society of Victoria, ref GS-ICD-8*

acted, and derailed the three vehicles located there.[13] 146 NQ would later be obtained by the Ron Kain group at Tecoma, for eventual use with the Walhalla & Thomson River Steam Tramway from the late 1960s, as a passenger carriage fitted with tramway seats.

In the late 1960s all ten of the NQ trucks at FCV Erica were taken to Walhalla for the Walhalla & Thomson River Steam Tramway (W&TRST), along with 146 NQ from Tecoma and the body of 8 NU from Moyhu. When the W&TRST ceased operation in the early 1980s its locomotive, (Decauville 43/Couillett 861 of 1886) and most of the rolling stock was privately purchased and was stored at various locations. The loco was taken to a private property at Belgrave South where a small amount of track had been laid. This joined the loco (Decauville 90/Couillett 986 of 1890) from the former Whistle Stop Amusement Park at Frankston, with some of its rolling stock being stored elsewhere. All have since been moved to the Puffing Billy Railway.

Right: *On 19 December 1952, following torrential rain a few days previous due to cyclonic weather in Bass Strait, the hillside above the cutting just beyond The Tanks, started a remorseless downhill creep. This slowly encroached upon and finally covered the track by Christmas Eve, causing all trains to be cancelled and travel plans disrupted for Melbourne residents intending upon spending the holidays in the hills. Trains were re-instated from 26 to 29 December between Upper Ferntree Gully and Belgrave, with railway buses used beyond Belgrave, to Emerald. As shown in the photo from* The Herald, *Melbourne, of 26 December, dozens of labourers were initially brought in to try and clear the muck. The line was re-opened in January, with ongoing remedial works being carried out using a Harman dragline excavator and a bulldozer brought to the site by train.*



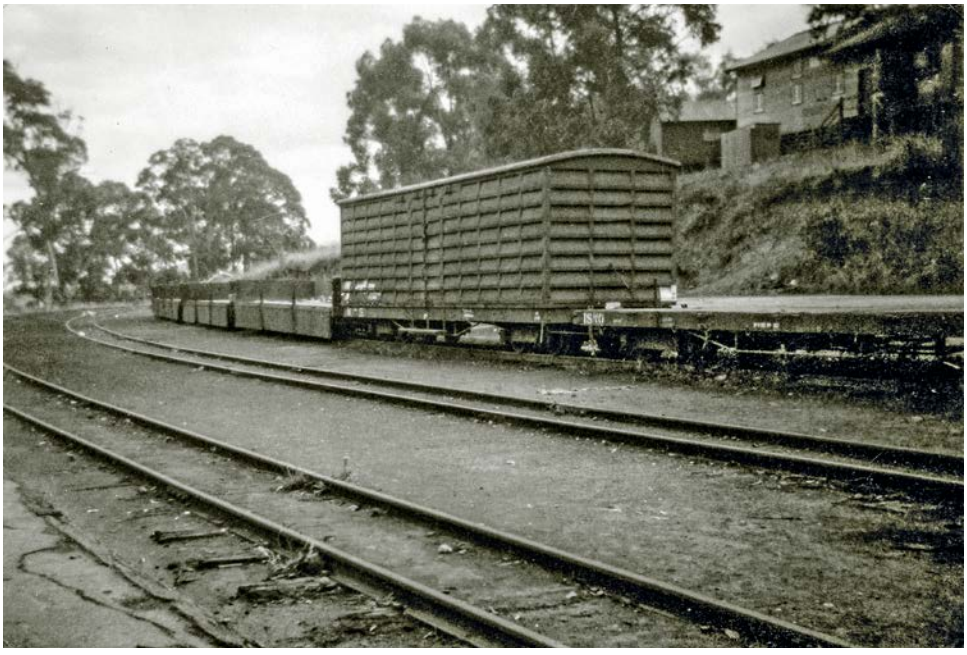
Further subsequent details of the trucks left behind:

- **13 NU** [built 1911] Due to the pending dismantling of the line through Cockatoo the PBPS sought approval from VR to move 13 NU from Cockatoo to Emerald and this move by road took place on 16 December 1961. It is still owned by the PBPS and currently awaiting restoration.
- **26 NQ** [built 1898] which on arrival at Puffing Billy had the body of 8 NU, now has a 2000 gallon water tank sitting on top.
- **29 NQ** [built 1898] has been rebuilt into a medium open truck.
- **110 NQ** [built 1910] now carries the body of 8NU.
- **146 N**Q [built 1910] is in use as a modified copy of an NQR excursion carriage.
- **164 NQ** [built 1911] is in use as an underframe for a steel framed NBH carriage.
- **78, 82 & 93 NQ's** from Belgrave were scrapped in 1954, with **18 NQ** surviving until 1968.
- **14 NU**, also from Belgrave, was transferred by the VR to Colac, and later came back to the Puffing Billy Railway.

Above: *Pinnock's Road level crossing, Emerald. Open wagon 163 NQ, having been stolen from Emerald yard, gravitated down the 1 in 30 grade, over two public road crossings before derailing near Pinnock's Road. A second group later re-railed the wagon and rode it down to Clematis station and placed it in the siding. Still later, it was removed by a third group and pushed towards Belgrave, before derailing near the Main Road level crossing (a photo of the wagon at that location may be found in* Narrow Gauge, *No.178 Sept 2005). Photo: Doug Berriman collection*

Above: *146 NQ lies in a paddock above Emerald station yard, having been hauled there by VR workers to ensure it was not subjected to a similar illegal joyride as 163 NQ. Photo: Doug Berriman collection*

Right: *Belgrave yard, showing some of the rolling stock remaining following closure of the line. After nearly 14 months closure, these wagons were retrieved on 13 October 1954 when the VR steamed 3A and ran it from Upper Ferntree Gully to Belgrave and return. All was quiet for another two months until the Melbourne newspaper* The Sun, *convinced the VR to run "Farewell Puffing Billy" specials, ostensibly for the children of Melbourne. The rest is history . . . Photo: Doug Berriman collection*



The deviation of the line looking towards Belgrave that was constructed by the PBPS using resources provided by the Australian Army. The new alignment shows curve numbers 25 and 26 on 21 August 1960. The original line is to the right behind the trees.

Photo: Weston Langford collection (100157)

Editor's note: The Mystery of the Tenth Truck

In his youth, Frank Stamford regularly walked along the narrow gauge track from Emerald to Clematis and vividly remembers an NQ truck with iron framing for sheep transport in the siding at Clematis. This is an additional truck to those nine covered in this article. Then one day it suddenly vanished, but there were remnants on the ground, which indicated it had been cut up on the spot. Frank recalls that probably happened about the same time that the VR hauled the remaining NQ truck up on to high ground at Emerald station.

Frank visited Emerald frequently with his father and was able to observe the way various trucks moved about, and the NQ truck in the siding at Clematis was there at the time of the landslide. In fact, it might have been there quite a long time (abandoned and forgotten by the VR perhaps, and not on any of its files as it had already been written off). He noted that it was different to the NQ trucks at Emerald - it had the iron framework on it for the convenience of tourists and sheep. [Ian Barkla's listing of all Upper Ferntree Gully to Gembrook rolling stock, compiled as at 29 January 1953 (and unchanged at closure) records four NQ's fitted for sheep transport – numbers 79, 86, 172 and184. Ian was the regular fireman on the Monday and Thursday Mixed to Gembrook. See *Narrow Gauge*, No.171, Dec 2003, PBPS] Both 79 and 86 are recorded as being scrapped by the VR in 1954 and 172 is recorded as being sold in 1954. However, 184 is listed as being not found at a stocktake of narrow gauge rolling stock on 30 June 1958. Could that be the missing one?

Frank recalls seeing the two NQ trucks in the siding at Emerald and then noted that one had disappeared. Walking down the track to Clematis he found it [163 NQ] near Pinnock's Road and does not remember it moving beyond that location, thus excluding any possibility it might be the mystery tenth truck that he noted at Clematis at the same time.

He also noted the other Emerald NQ [146] truck had disappeared from the yard, and bizarrely had been relocated to the high ground behind the station yard. Frank recalls: "My Emerald aunties, who seemed to know everything that was going on in the town, explained that this had been done to prevent anyone from setting it loose down the line."

References

1. *The Herald*, Melbourne 24, 26 Dec; *The Age*, Melbourne 26 Dec 1952; *Narrow Gauge* (PBPS) No.154 Sept 1999
2. *Mountain District Free Press* 20 Aug 1953 "They're fighting this with shovels" - graphic description of the landslip and clearance works.
3. 'Extracts of incidents, derailments etc from the I.R. Barkla diary of Upper Ferntree Gully-Gembrook running'.
4. *Mountain District Free Press* 27 Aug 1953
5. *Mountain District Free Press* 24 Sept 1953
6. Doug Berriman collection photo No. 367; *The Age*, 14 Oct 1954; *The Sun,* 14 Oct 1954
7. Andrew Lyell Photo.
8. Victorian Railways memorandum Sec 54/9905
9. Victorian Railways memorandum RS.54/4854 & Sec 54/1543 dated 11 May 1954.
10. Victorian Railways Sec 61/9439 - letter to the Secretary PBPS dated 9 October 1961.
11. Doug Berriman collection photo No. 466.
12. *Narrow Gauge* (PBPS) No.172 March 2004. Letter to the Editor
13. Doug Berriman collection photo No. 461

The Magnet Silver Mining Company was floated in Launceston in 1894. The deposit of galena was discovered in 1890 by WR Bell under a spur of the Magnet Range about five miles west of the rich Mt Bischoff 'mountain of tin'. Isolation meant that exploitation must wait until transport problems were solved. Initially, a wooden horse-drawn tramway was built out to the Corrina Road to the south, and ores were then taken on drays for a slow and round-about trip to Waratah. This proved totally inadequate, and a narrow-gauge steam tramway was built up through wild and steep country to a trans-shipment junction with the Waratah Branch of the EBR. This photo shows the mine site a few years after the arrival of the Magnet Tram in 1901. One of the unique Mallet locomotives can be seen in steam at lower centre. Despite the curved track beside the locomotive, there were apparently no turning facilities on the system, and all photos of the tram showed locomotives facing towards the junction, and they would tackle the big climb against the load funnel-first. *Trainiac*

The Magnet Mine and its trams
The Waller connection
Part 1: James Hardress Waller

by Scott Clennett

The Waller family background

George Arthur Waller and his wife Sarah Harriet Atkinson were married in May 1865 in the Irish county of Tipperary. George was the Chief Engineer and Chief Brewer at the Arthur Guinness & Co's brewery, then owned by a cousin. But George apparently developed religious objections to alcohol in middle age and left to start up an unsuccessful pottery making business in County Leitrim. This failure forced him to sell much of his inherited property assets, and he and a heavily pregnant Sarah with six surviving sons, emigrated to Tasmania in 1882. The family baggage is said to have included a cow to provide milk for the children!

Their second and eighth sons William and Arthur, and only-daughter Gundred, had already died in infancy. Their ninth son Edward was born in Hobart soon after their arrival, and the youngest James followed in July 1884, making a total of eleven children, ten of them boys.[1 2]

The family initially lived in Newtown, on the then-northern outskirts of Hobart, and later on a farm near Bismark (now Collinsvale) off in the high country to the north-west. He named this farm and house *Glenlusk*, after his former home estate *Luska* in Tipperary. Over the years, the name *Glenlusk* has become the name of the local district, but the house itself was burned down by the mid-1920s.[3]

George became a respectable member of Hobart society, was made a JP, as he had been back in Ireland, and was listed as a Fellow of the Royal Society of Tasmania in 1886.[4] He was also a strong member of the temperance movement.

This history concerns the life of four of their ten sons:

No. 1. Richard (Dick) (1867-1942)

No. 10. James (Jim) (1884-1968)

and, to a lesser extent:

No. 4. George (1872-1956) and

No. 9. Edward (Ned) (1882-1970)

Their father George was reasonably prosperous in Tasmania, and in 1900, he and Sarah, returned to Ireland, leaving many of their sons behind, and repurchased *Luska*.[5] He was then 65.

By then, Richard was 33 years old, had gained tertiary qualifications in engineering, possibly in Melbourne, and was later described as a mining and railway engineer. He had gained "… valuable railway construction experience in the Zeehan and Dundas area …" on Tasmania's West Coast.[6] In December 1896 he had married Lucie Collier, a Hobart girl who was to become his much-admired wife as they embarked together on a mining life.

In January 1901, he took over the management of the Magnet silver/lead mine on Tasmania's West Coast, about five

miles south west of the Mt Bischoff tin mine. Lucie was with him. His position included the responsibility to design and construct the 2 ft gauge Magnet Tram from the mine to a transfer junction with the Emu Bay Railway's 3 ft 6 in gauge Waratah line about 1½ miles east of Waratah. The length of the line approached ten miles, although its termini were only about four miles apart. The line was completed in December 1901.

In 1902, Richard wrote a paper on the Magnet Mine and the planning and construction of the tramway, that was published in the Tasmanian Secretary for Mines Report for 1901-1902, and a large part of this history has been based on that paper.

Brother George also took on a professional life and had become Assistant Government Geologist for Tasmania by the turn of the century at the age of about 28. He was responsible for a significant number of geological reports, particularly on the Tasmanian West Coast, including one concerning wolfram mining in the Pieman River area that was published in that very same Secretary for Mines Report for 1902. By then he was married and living at Zeehan, but he was unfortunately widowed in 1908, after which he moved to live on the Atherton mining fields in Queensland, possibly via the Cooktown area.

Ned and James, who were close brotherly mates, and were the only siblings who had been born in Hobart, had led a rather mixed childhood, living at Newtown, and then at *Glenlusk*, and going through several stages of schooling. Life on the farm was somewhat idyllic, and whetted Ned's ambition to take on a farming life, and at about the time their parents had gone back to Ireland, he had moved to an isolated property at *Cunderang* in the rugged Great Dividing Range inland from Kempsey, and southeast of Armidale, Northern NSW.[7] There, he worked on the *Cunderang Run* that had connections with his father's first cousin, George Studdart Waller Jnr., who owned a property *The Grange*, at Wallarobba, near Dungog, NSW. Life was now hard for Ned, as he landed there right in the middle of the notorious drought of 1901/1902. It was to *Cunderang* that James Waller went for a break after he had spent time working on the Magnet tram construction. Ned later became a highly successful rancher in Saskatchewan, in Canada.

James finished school about the end of 1900, and now his life was before him. He was sixteen. Since his parents had left for Ireland, he had been boarded with the family of a retired Indian Colonel in Hobart, and the plan had been for him to go 'home' to University as soon as he had matriculated. But that did not appeal to him - he wanted to see more of Australia first.

Brothers Richard and George were still in Tasmania; both were married, and both lived on Tasmanian's wild West Coast, Richard at Magnet and George at Zeehan. They were effectively James's de facto guardians.

Like brother Richard, James left his writings to the benefit of history, but in a totally different form. This comprised an unpublished autobiography which he wrote for several of his grandchildren in 1947, nearly fifty years after the events covered in this account, and after an extraordinary life as a railway, mining, military and renowned consulting engineer, collecting a Military Medal and an order of the British Empire on the way.

An Explanation

Many excerpts from that autobiography are included in the following, particularly insofar as they relate to James's time as a navvy on the Magnet Tram construction, and as a miner at the Magnet Mine and elsewhere on the West Coast. For clarity, no specific references are given for these excerpts, but such are implied within the general text by being in quotation marks, or as indented quotes. Where interpretations of the original typed but sometimes unclear manuscript have been necessary, some minor edits have been made.

However, the reader should bear in mind that the passage of time in James's memory, could, and at times did, lead to errors in chronology, in the basic sequencing of events. The author has been able to address these by placing precise dates on some of these events, such as the that of the driving of the last spike of the Magnet Tram (5 December 1901), of the last day of the Sydney Ashes Test (18 February 1902), of the date James returned to Hobart from Sydney as a passenger in steerage class on the SS *Oonah* (24 February 1902), and his subsequent return to Magnet a few days later. It is also obvious that conversations he quotes should not be taken as absolute, not only because it must have been impossible to remember them in detail, but also because the ears of children would need to be protected from the type of expletives that would have inevitably been used by the navvies and miners at the time!

The reader is referred to Part 2 of this article for a detailed account of the planning, construction and equipping of the Magnet Tram, and the role of Richard Waller. What follows in this Part is the more personal story of James Waller's time as a navvy on the line, and a miner at Magnet and at Zeehan]

A Navvys' Life

James' school friends had mostly been townies, but he was bush-bred and hated the towns. But he had just left school, and at age 16½, he wanted to go bush.

> My admiration was always directed to the men in the Bush. They were strong and tough and independent. They could do anything – chop, dig, shoot, ride and cook. They laughed at hardship and … they could tell yarns. Mostly they could scarcely read, but they could talk.

But where could he go? Unlike brother Ned, James was done with farming, and most of all, he was done with milking cows. The only alternative James could see within reach was mining – he saw that as a man's job, and miners as a tough and fearless breed.

And then mines were always in queer places, at least all the mines I knew anything about were. These were on the West Coast – an incredible place. … … At this time there were few roads, and fewer railways over there… .

… Coasters boast that they only have two showers a year, and one day in between. …. flora is in complete command, the fauna almost non-existent. The forests, at least in the valleys are quite impenetrable for all but expert axemen. … .

Yet nearly every known mineral is found there … a prospector does not look for gold and tin. He looks for just everything. Tin, zinc, copper, galena (silver-lead) and other lead ores, manganese, gold and even osmiridium may be found. Mt Bischoff was, in my time the biggest tin mine in the world; Mt Lyell one of the biggest copper mines.

To Magnet and Jimmy Herrich

James resolved to go and join his oldest brother Richard at Magnet, although of course, Richard was his guardian, so maybe he had no option.

To get there was a long trek. At least he could now get all the way from Hobart to Burnie by rail – the latest section of the western line, from Ulverstone to Burnie had been open for just a few months – and he could then get an EBR train to Guildford and Waratah, but from there he would need to walk. Such a trip would take at least two and probably three days.

Richard Waller was by then the manager of the Magnet Mine, a silver/lead deposit, some 4½ miles west of Waratah, and when James arrived, Richard was building a tramway into it. But when James asked him for a job, he was told to go and see Jimmy Herrich. In this, Richard was wise. He explained later that if James … *started as the boss's brother there'd be the devil to pay.*

Jimmy (Herrich) was a first-class ganger; responsible for his men and chose them personally. … An old timer was Jimmy of the requisite toughness to handle his somewhat tough gang.

So, with trepidation James had to walk the formation, looking for this Jimmy Herrich. He came up to a gang working in a cutting, and bravely asked:

"Where's the Boss?"

A couple of navvies pulled up and looked at me, they looked pretty fierce to me.

"What d'ye want 'im fer" said one.

"Want a start" I said.

"D'ye know 'im when you see 'im"

"No", I said.

A shadow of a smile crossed his face, and I didn't feel exactly encouraged.

"Well, if ye don't know 'im, ye soon will if you get a start, young feller. That's 'im over there in the weskit".[8]

James scrambled off to face the redoubtable Jimmy:

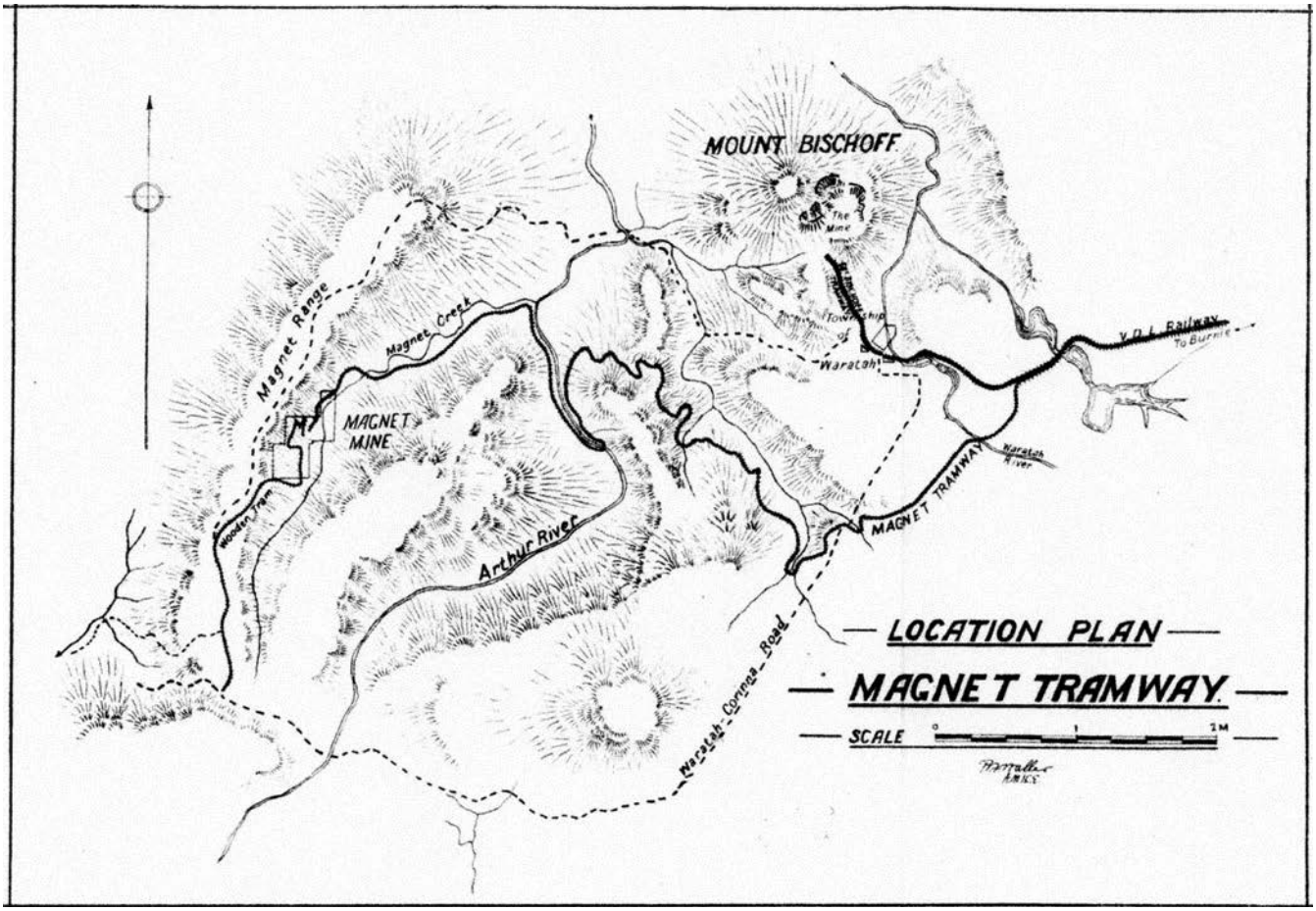
"Mornin' Boss"

"Well young feller" –(this 'young feller' business was getting a bit sour) – "What yer want?"

"Any chance of a start?"

"Wot as – rouse-about?"

James did his best to look big' (He was only just over nine stone) but said that he could start as a rouse-about, but he'd thought of a start in the cutting.



Richard Waller's signed map as reproduced in the Mine's Department Report for 1902. Note the route of the first wooden tram running southwards from the Magnet Mine out to the Waratah-Corinna road along which drays initially carried ore to Waratah. The Magnet Tram itself ran down the valley of Magnet Creek to turn right into the Arthur River gorge, running up its western side to the river crossing. It then climbed steeply back up the eastern side of the gorge before swinging away to the east and southeast up difficult sidling country, meeting easier grades after crossing the Corinna road and going on to Magnet Junction. Report of the Secretary of Mines for 1901-1902, Hobart, Tasmania, Mineral Resources Tasmania

No. 1 Mallet heads two trucks and the guards van halted on a 'special' on its way down to Magnet. Note the stay-rod from the forward corner of the cab roof to the top of the tank, perhaps the easiest identifier of the Magnet mallets. The 'load' comprises about 50 formally dressed men, perhaps eight ladies and a girl in the rear truck, a young boy in the first truck and a man with a bugle three places ahead of the boy. The train is possibly on the way to the tramway's opening celebrations in December 1901, … and in the last truck – there was beer!
Photo: Wikimedia Commons: 0-4-4-0T locomotives (28363418836%29).jpg

"Can you stick it- ye look a bit light?"
Jimmy looked him up and down:
"All right young 'un, but if you can't stick it you're OUT", and the way he said OUT sent a shiver down my back.
"Got a shovel?", Jimmy asked.

James didn't know that each man provided his own tools and so he was sent off to the storeman to get a shovel. (A shovel man stuck to his shovel; he worked with one or two pick-men, keeping them clear of muck)

I was shovelling for one pickman, but I was horrified at the rate that he produced muck. I had expected to shovel into a barrow, wheel it (to dump), and then come back for more. But no. I shovelled into a truck, and a trucker took it away leaving an empty one in its place. If I'd had a barrow, it would have been better – one could straighten the back, but that was not to be.
Jim stood up to ease his back.
"Tired, young 'un?" said my mate.
I was just going to answer, when from the distance came one of Jimmy's whispers.
"Hi young feller, what's the matter with that there shovel?"
I was down to it again like a flash.
"Yer don't know Jimmy yet", said my mate.
However, I wasn't too bad. I was far from beat and was so damn thin I didn't even sweat. Also, I had learned that if Jimmy wasn't in sight, it didn't mean he couldn't see you. And if he was a quarter of a mile away, it didn't mean he couldn't speak to you, WITH EASE.
It musn't be thought that Jimmy was a slave driver. He was nothing of the sort. He looked after his men. …
Back in camp, if the cook wasn't doing his stuff, Jimmy would be down on him like a ton of bricks:
" 'ere Cookie, wot's the matter with this 'ere cook house – EH?"
And he had the personality of a leader; it was good to say that you had worked for Herrich.
Since those days I too built railways and I can't call to mind even one walking ganger that was better liked by his men than Jimmy, or who got better work out of them, or who's men gave less trouble. And where Jimmy Herrich went, his men would follow.

A conspiracy?

James found out many years later that his introduction to Magnet was not quite as he had thought. Richard had talked it all over with Jimmy before he had let James go there; Jimmy knew perfectly well who this "young feller" was.

The result of that talk, Richard told James when they were both on railway work in Spain many years later, were based on certain principles:

1. *If the gang got any suspicion of favouritism, Jimmy would be damned forever in their eyes; Jimmy never had a favourite.*
2. *If this suspicion had arisen, I would almost certainly have had an 'accident'.*

On the other hand, if Jimmy could carry it off, and I could stick it, it would go a long way to putting me on my feet. I did stick it – just. I was (forever) grateful to those two conspirators.
But why did Dick shove me into an earthworks gang?

This was all part of the conspiracy. The whole idea of Richard letting James go to Magnet was to have him work

as a miner before he became a mining engineer. But on the West Coast, this would not be easy; miner's jobs were held in great esteem – it was not easy to get underground. At Magnet, perhaps the men who built the line would get first option.

The Magnet Mine and its Tram

So came the day when the line was basically finished. Its little locomotive arrived at the mine-site buffers bedecked with bunting, and proudly puffing steam. And behind it drew trucks full of the men who had worked on the line:

> *A smile a foot long on Jimmy's face, and the manager's wife on the regulator. Miners were all assembled in the newly erected ore shed – there were tables and benches, and in the last truck – there was beer!*

The manager's wife, was, of course, Lucie Waller, and it was she who ceremoniously drove the last spike. It was 5 December 1901. However, there was still some ballasting work to do, and it was not until into January that the last of the workers were finally paid off, and the line went into full service.

But what was it all about?

It had been in 1890 that William Robert Bell had discovered a substantial galena[9] ore body about 4½ miles west of Mt Bischoff, but a concerted move was not made to exploit it until the Magnet Silver Mining Company was floated in Launceston in 1894. However, there was a significant problem of transport to be faced. Despite its proximity to Mt Bischoff, the two mine sites were separated by the deep gorge of the headwaters of the Arthur River. And there was a significant difference in elevation. Waratah, the town that had grown up to service the 'mountain of tin', lay at just under 2000 feet above sea level, while the Magnet deposit was at about 1440 feet. Yet Waratah, with its railway to the sea at Emu Bay (Burnie), was the obvious place to which to transport the Magnet ore concentrates. Initially, the company constructed a wooden horse-drawn tramway up the steep hill above the mine to the southwest, and then running for nearly three miles southwards to the gravel road that ran from Waratah to Corinna. Here the ore could be taken by dray the seven miles back to Waratah, overall a very roundabout route. But as production grew, that tram proved totally inadequate. Nevertheless, in what turned out to be a very short life, it carried out ores to the value of nearly £30,000. This led to the proposal to construct a more formal steam line out to a transfer junction on the Waratah railway.

Trial surveys were done of two possible routes in 1900, both based on crossing the Arthur River in the gorge. The longer route (of 13½ miles) crossed near the top of the gorge, and thence struck heavy going. The second, that crossed further down the river was shorter, at 9½ miles, but still took a tortuous route, particularly after the crossing, and at least until the last mile or so was reached.

The second option was chosen, although it would encounter steeper grades and tighter curves (maximum 1:25 grades; minimum 1½ chain (99 ft) radius), and a more formal survey commenced in early 1901. Construction of the tramway under Richard Waller's direction closely chased this survey. Progress was rapid, and, as noted above, the line was effectively completed on 5 December 1901. It was in this period that Richard and Jimmy Herrich took young James Waller on his steep learning curve:

> Clearing and culvert works were all let to contractors, while the remainder of earthworks were done by day labour. In places, the working conditions were extremely rugged, and wheelbarrows, picks and shovels were the only aids to assist with construction work.[10]

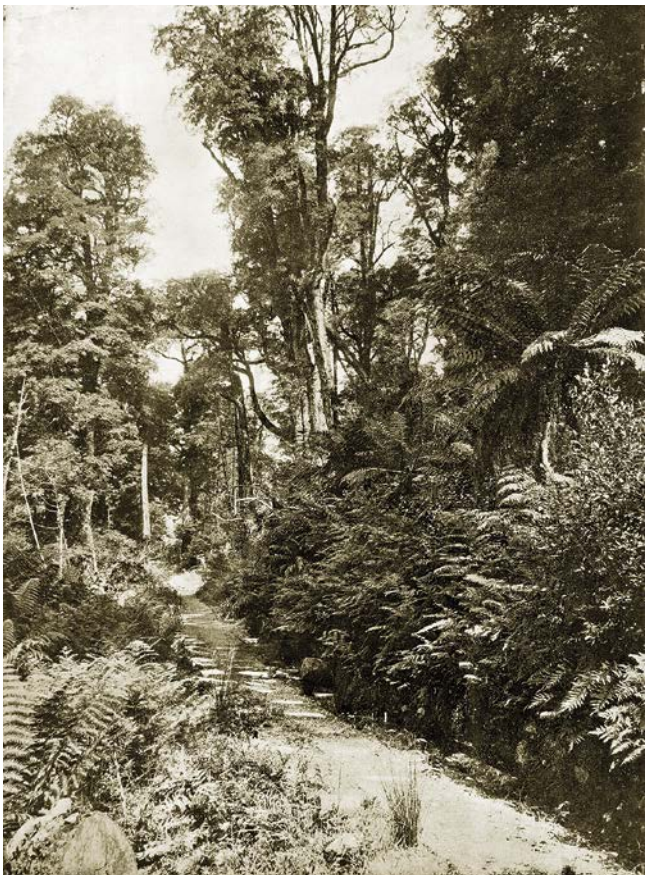
The 2 ft gauge line was laid mainly with 30 lb per yard steel rails, sitting on about 22,000 sleepers (many said to be of Huon pine). Soft ground in some areas meant that sleepers were very closely spaced, but at least plenty of suitable ballast was available.

At the Waratah end, the line met the 3 ft 6 in gauge EBR Waratah branch at what became Magnet Junction, although it was really a transfer junction, with lines of different gauges. It was sited about 1½ miles to the east of Waratah. Facilities included a shed for two locomotives, a coal stage, a goods shed, a sheltered trans-shipping shed, and two houses, for the stationmaster and the driver.

The line was equipped initially with two Orenstein & Koppel locomotives, and another followed. There were also ore wagons and a guard's van, but other than a crude converted T-model Ford railcar for a period in the 1920s, it never had a formal passenger vehicle.

The first of these locomotives, Magnet No. 1, was a semi-articulated compound Mallet type (O&K, B/No. 882 of 1901, 0-4-4-0T with 8 in x 12 in and 12 in x 12 in cylinders). It weighed 18 tons and was rated to haul 35 gross tons up the steeply graded line.

Magnet No. 2 was a more conventional 6¾ ton 0-4-0T locomotive, (O & K B/No. 718 of 1901) and had a rated gross



Titled "Old Tramway Magnet Silver Lead Mine", this photo shows a section of the formation of the original three-mile long horse-tram from Magnet out to the Waratah-Corinna road to the south. From there, ores would be taken by drays to Waratah. Apart from an initial steep climb up from the mine, the route was an easily graded wooden railed horse tram. Although totally inadequate as the mine developed, it carried out first-grade ores to the value of nearly £30,000 in its short life. This went a long way to funding mine infrastructure, and the new tram which replaced it at the end of 1901. At the time of this photograph, it had been out of use for about 4½ years.

Weekly Courier *2 June 1906 Page 24, Spurling Studios photo*

This photo of Magnet No 3 shows the mechanical layout of the compound Mallets. The cylinders of each engine unit were at their outer ends, the opposite to those of the original NE Dundas K-class Garratts. The rear four wheels were on the main frame with a wheelbase of 4ft 3in, and the leading articulated four-wheeled truck had one of 3ft 3in. The overall wheelbase was ten feet. It also shows a feature that distinguished the two Mallets, the name plates on the tank sides On No. 3 there were three small plates: the locomotive running number 'Magnet No 3' fixed centrally, the maker's plate and a small diamond plate below it, both fixed towards the rear. On No. 1 the locomotive running number was also fixed centrally, but with a larger plate fixed directly below it.

load on the line of 15 tons. With the arrival of Magnet No. 3 in 1908, No. 2 became redundant, and was sold to the North Mount Farrell Company soon after to work its Farrell Tram link from Tullah to the Emu Bay Railway at Farrell Junction. There it joined a 6-ton Krauss 0-4-0WT (B/n 2640 of 1892). In 1921 the company took delivery of the well-known Fowler *Wee Georgie Wood* and followed up with *Wee Mary Wood* in 1924. With this, the O&K was withdrawn, with parts of it being later reported at the Lune River tramway in the south of the State. (reported in LR 157 on page 5).

Magnet No. 3 (O&K B/No. 2609 of 1907) was of the same basic design as No. 1. It arrived in 1908 and worked on the line until final closure in 1941. Towards the end, No. 1 was somewhat cannibalised to keep No. 3 going.

More detail of the locomotives and rolling stock are given in Part 2 of this article.

A break away from Magnet

James was not there to see the line go into service. Having worked on the Tram's construction for much of 1901, and after getting Richard's approval, James resolved he would go to visit Ned at *Cunderang* and set out before Christmas with his mate Jimmy Spent. They travelled as steerage passengers on the regular Hobart-Sydney trader SS *Oonah* at a very uncomfortable ten shillings each.

> My bunk was right in the bow of the Oonah, and she pitched like blazes all the way. The only way I could discover of getting … (any) … peace on that trip was to lie with my suitcase across my tummy. It was very unpleasant and lasted 24 hours.

But this was but one part of an adventurous nine weeks or so that James spent "seeing Australia": by rail from Sydney to Walcha Road station, and then a difficult trek by horse to *Cunderang*, then drought, isolation, chopping trees down so the starving cattle could get some sustenance, then surviving con-men on his return to Sydney, sleeping rough on the Domain, jumping steam street-trams to avoid conductors to and from the Test Match, and so on. But all this is another story!

Back to Magnet

Arriving back in Hobart on 24 February 1902, James soon set off back to Magnet but was not in time to see the opening of the Magnet Tram to traffic. But this had been something of an anticlimax anyway. When he had gone off to *Cunderang* in mid-December, there was still some ballasting work to be done, but the real celebrations had already been held on the 5th of the month, with the driving of the last spike by Richard Waller's wife Lucie, and the whole work force enjoying the beer at Ted Lynch's new Magnet Hotel.

The celebrations had been filled with enormous pride by all involved and James had been in the midst of it, as he recorded 45 years later:

> Whoopee! No longer would all the tucker have to be man-handled out from Bischoff; two general stores had been built and Ted Lynch had just completed the pub. Life was to change on the Magnet … with real shares … , a post-office, some hundreds of men, and literally a place on the map.
>
> And were we proud of that line! - with its snaking through the mountains, chain-and-a-quarter curves, and a special engine built by Orenstein & Koppel with a joint in the middle to enable her to get round them – four trucks and a brake van. 80 tons of ore every trip and two trips a day – ten miles per hour she could go – and what a whistle! I say we were proud!

The SS Oonah *(1758 t), launched in Glasgow in 1887, was the first steel ship of the Tasmanian Steam Navigation Company (TSN) fleet, and served for 46 years, later under the flag of the Union Steamship Company. For much of that time, she provided a regular service between Hobart and Sydney. It was on the* Oonah *that James Waller and his friend sailed as uncomfortable steerage passengers to Sydney in mid-December 1901.* … My bunk was right in the bow of the Oonah, and she pitched like blazes all the way. … *Yet, after an adventurous 2½ months, James arrived back in Hobart on 24 February 1902 on the same ship, and then returned to Magnet.* Mercury *photo - Rex Cox collection*

> Proud of the Manager who surveyed it, proud that it had cost less than the Manager had estimated, proud that we'd pushed (it) through three months ahead of time.
> And I think, indeed I know, proudest of all (was) the Manager's wife, tiny, neat, pretty as a picture, who had walked the line every day with the Manager, lived in his tent, eaten the same food as the men; knew everyone by his nickname, who was the only woman on the mine – Yes – even then – she had an Eton crop and wore a tam-o'-shanter.

A Miner's life

Now that James was back at Magnet, his next ambition was to experience life as a miner; how else could he become a mining engineer?

But it was to be more formal than that, for he then entered a two-year pupillage under his brother Richard.[11]

The men who had worked on the line had been paid off in January, and then the line was put into full service. Perhaps Jimmy Herrich went off to another job, and no doubt many of his men would have followed him, but many others stayed on to join the miners.

Jimmy Herrich! Who had conspired with Richard to get young James Waller to take on the life of a navvy, now moved out of his life. The whole idea of this conspiracy between Richard and Jimmy Herrich was to harden James for working in the mines, as a miner. But of course, mining jobs were held in great esteem, and it was not easy to get underground. James had won his spurs as a navvy, albeit for only a relatively short time. The men who had built the line would get first chance, and James was one of them. However, there was still an 'apprenticeship' for him to serve: he would have to prove himself working on the surface before he could go underground, and even then, he would be seen as a novice down below.

With the opening of the tram, the way was clear for serious mining to get under way. Until then, production had been held back by the limitations of the original wooden railed tramway. But now '*expansion*' was the word, and miners flooded into Magnet, and with that, accommodation became a problem.

And this was when the Waller brothers made a mistake. When working as a navvy, James had lived with the men in one of the bunk tents. He rarely went to Richard's tent; when he came off the job, he just sat down and enjoyed the yarns. Now there were only limited huts to live in, and it seemed reasonable that he might stay in his brother's house. This was the mistake.

James had been one of the men on the tram works; now he found himself isolated.

> To me this (was) unbearable. I used to notice, or fancy I noticed, a certain reluctance to talk and I was unhappy.
> Dick understood … and as soon as possible I was allotted a share in a hut. Quite soon the climate changed … and all was well.

At the Magnet

At last at the mine. James started as a carpenter's mate assigned to Bill Chandler, an ex-ship's carpenter.

> Bill had three adzes of different sizes, three axes, the largest with a blade fourteen inches wide, two saws and a plumb bob. As far as I … (know) … no other tools at all. They were all kept superbly sharp.

Bill could use these tools with great precision, never needing a plane or a square: ("there's nothing square in a ship").

Nevertheless, James's job was to square timber and cut off lengths to the order of Arthur d'Eune, his particular mate and his hut-mate.

Bill and Arthur taught James many things, and his hut-mate taught him to play the banjo. In fact, when Arthur left Magnet, he gave James his old banjo. He still had it nearly 50 years later.

Down below

After about four months with Bill, James was approached by Frank Minter, the underground boss:

"Like a chance below, boy?"

Of course, James was keen to go, and now there it was - he was to start off as a 'trucker'.

The mine was in the side of a steep hill, and as the lode went down, four adits were driven into its side. James was to start in number four, the lowest.

> It went about five hundred feet into the side of the hill before it cut the lode. It then branched off in both directions along the lode. The main levels were well timbered, nearly six feet high and averaged three feet wide. The rails for the trucks ran onto flat sheets of iron where junctions or sharp turns took place. The trucks were small but … (filled with ore) … they carried nearly a ton. They were fitted with a 'hanger' in front, an iron candlestick with one candle, and a 'strong-arm' or lever about fourteen inches long which hooked onto the back and was used for swinging the whole caboodle round to change direction at a flatsheet. …
>
> … to start with you come in with an empty truck, walking on the rail and pushing it up the slight incline until you come to the flatsheet. You screw the truck round carefully and get her on the rails again and off you go (In the new direction). What could be easier?

Trouble!

But James was a novice, and with the exuberance of youth, thought he knew it all! He soon got into trouble. The truck was to be stopped under a 'rise', a chute that came down from the stope above where the actual ore was won. The chute was closed at the bottom with a plank about two feet long, effectively a 'trap-door'. The plank would be levered up and the ore would run out. The 'door' would then be closed using the strongarm. But James didn't really know how! The ore took charge, pouring out uncontrollably. The rise had 'run-away', and soon the whole level was blocked, and with the truck underneath. And James's candle had been knocked out; he and the miners were trapped!

….And you feel a damn fool, I did anyhow!...

To make matters worse, James was on the inside of the blockage, and so could not get out to raise the alarm.

By the time Frank had noticed that there were no trucks coming out, he had got men from the No. 3 adit to shovel up the ore into another truck on the exit side, then take it out one truck at a time, about nine hours had passed.

However, there did not seem to be any real repercussions; it was known to all the miners that accidents would happen, and runaways were not so rare. The worst part was the chiacking that James had to suffer. Perhaps there was some security in being the boss's brother.

Another accident occurred when one of the trucks got out of his control when James was trying to turn it on a flatsheet, and he missed the 'exit' rails. The truck tipped over and spilled its load. In the confines of the tunnel it was difficult to tidy it all up, but a mate Billy pitched in, and Frank Minter never found out.

But at least, there was that first week's pay, and James did not get sent back to the surface. Billy took him in hand and showed him the tricks in negotiating the flatsheets; in a year or so James might graduate to the face and earn 8/4d a shift, instead of 7/0d as a trucker.

Billy moved on, and James put in a word for two of his own ex-school mates, and the three of them shared a hut. It was 10 feet by 7 feet with split timber walls and a corrugated iron roof. It had a fireplace at one end, wide enough to sit in (like an inglenook), a single and a double bunk, and a table. Not much room for three, but more often than not, at least one of them would be on shift; they were rarely all three together.

So, James settled into the life of a miner, and saw the rough and the smooth times of a mining town. Except for one thing, he was relaxed. This was when working on the face, he and an older mate, Jack Dunne were drilling with a drill-bar and a sledgehammer; Jack holding and turning the bar, and James on the hammer. In the confined space James 'came off' and hit his mate's head. But Jack insisted it was his fault – he had moved the bar! But James knew he was lying, yet Jack was quite vehement about it. Perhaps that was because old Jack had become James's mentor, possibly at brother Richard's direction. Certainly, James declared later that Jack had taught him all he knew about mining, and perhaps the older man was jealously protecting his student, and his own reputation.

Lucie Waller

There were only three women at Magnet:

> Sailor Jack's old woman, an old trout that ran the joint where a few of the chaps lived, and the devoutly worshipped Lucie, my brother's wife. Lucie was the guardian angel of the mine. She knew every man, she pulled everyone's leg, she nursed them, lent them papers and – well Lucie was just civilisation, that's all that's to it. And best of all, she was a looker who dressed carefully always. Lucie it was that mended Jack's jaw, who heard again and again and was expected to share the remorse of Jack who "moved the bloody drill and let the young lad down".

Lucie and Richard had quite a nice little house, and sometimes a maid (she was the third woman) This made things quite complicated.

> Generally speaking, it was better for the peace of that mine for there to be no maid, and strictly speaking, better for the maid too!

The couple made a point of entertaining the miners, usually on a Sunday evening in that little house, and were strictly fair about it – there was no favouritism, everyone was on a rota. There was music and singing, … hors d'oeuvres and cake, and tea out of china cups.

But there were the tough times too. Like the riotous binges that would turn the pub into chaos on payday. Or the men who saved up their pays to go off on a month-long bender to the Melbourne Cup, and return broke to tell of the money they took from the bookies, the hotels they stayed in, and the 'ladies' who fell for their charms and then slinked off into the night.

Few of them ever saw the Cup actually run!

Moving on

By now, James had spent two years at the Magnet mine, had finished his pupillage, and wanted to move on, particularly to experience the differences with the mining methods and culture at the Zeehan field.

James's brother George and his wife Edith lived at Zeehan where he was the Assistant Government Geologist and knew all the features of the field. James could stay with them until he got a job at a mine, but there was no easy job for him just because he was the brother of two well-known professional men.

But wherever James went, there were no jobs. Metal prices were down, no-one was hiring. Only Tommy, the manager of the Queen No.4 mine gave any hope. James did not know why Tommy took to him, perhaps Frank Minter had written to him, but he told James that he would be taking on some more men in about three months' time; would he like him to put his name down? Yes. But what to do in the meantime; he could not sponge on George and Edith for long.

James decided to go prospecting. He took out a miner's right, bought a tent, a billy-can, bucket, frying pan, flour, tinned food, an axe, a pick and a pan, and set off out to the Heemskirk field.

Two days it took before he set up camp beside a rivulet and fell asleep.

Then to work. James looked around for any sign of anybody's workings but found none. He spent days examining every inch of that stream, and weeks cleaning off the hard bedrock, but to no avail.

Then he struck: gozzan; a softish iron oxide, often associated on the Zeehan fields with galena (lead sulphide), and silver.

James had to peg his claim quickly, and then get to Zeehan to register it, and back as soon as possible. He got back at night and spent until morning trying to find his camp in the dark. More frantic work for the next few weeks, until he fell sick, (probably from scurvy) and soon became delirious.

He had to get back to Zeehan; how he got there he could not remember, only that he had stumbled on a pack track, and had apparently been picked up by a weekly mailman. He woke up in hospital. He took some time to recover, and then went back to stay with George and Edith.

Then the word came from Tommy that if James wanted a job he needed to go and start at the Queen No. 4. A dilemma; what a choice? But it was now out of his hands – he had been away from his claim for too long, and it had been 'jumped'.

As it happened, the 'jumpers' worked the claim for months and did no good, and James could be smug when he was at the Queen No. 4

But he was not there for long.

To University

Now it was well into 1904, and at 20, James had to face reality. He had left school four years earlier, after gaining his matriculation, at which time he was supposed to go to university to study engineering. However, he had prevailed upon his parents, and on his two brothers/guardians to let him see more of Australia first. Now, the time for procrastination was over, and James left Tasmania forever.

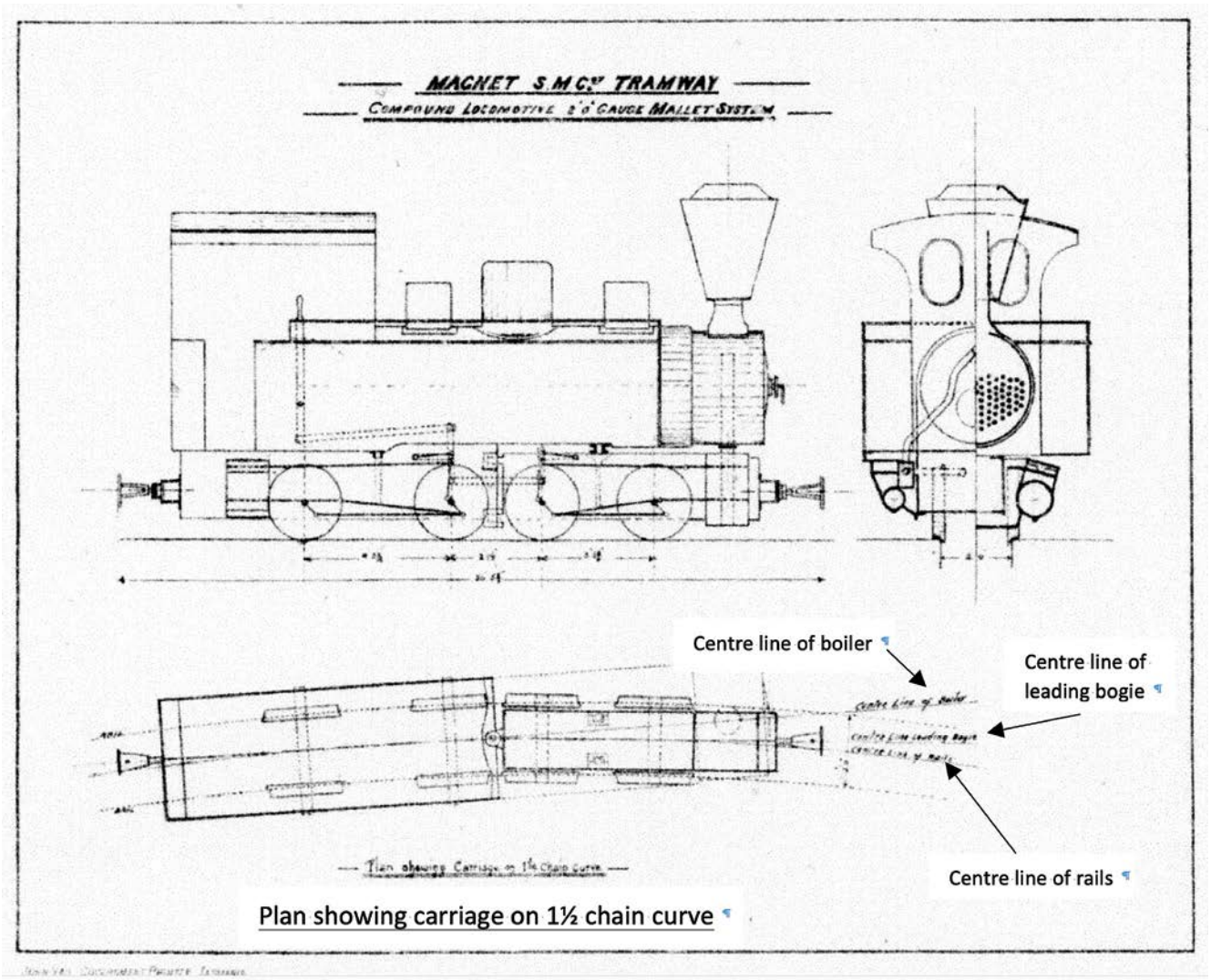
He enrolled in engineering at Queen's College, Galway, graduating in 1909, and followed up at the University of Cork, gaining master's degrees in Science and Engineering.[12]

James Hardress de Warenne Waller embarked on a notable career as a railway, mining, military and renowned consulting engineer.

The Future for Major James Waller DSO, OBE, ME, MSc.

After taking his degrees, James developed a strong interest in reinforced concrete, still a relatively new science, and journeyed to New York to study developments there. Returning to Dublin, he met up with Alfred Delap, and together the two men founded the consulting firm of Delap and Waller in 1911. This firm still exists today, covering a broad range of disciplines with offices in Dublin, Belfast (Antrim) and London and elsewhere.[13]

In 1913 the new firm had early success in winning a design competition for a bridge in Wexford.



The Magnet Silver Mining Company's Compound Locomotive 2' 0" gauge Mallet System, *showing basic assembly and articulation, as drawn by Richard Waller. Text has been added for clarity where digitisation was poor.*

Report of the Secretary of Mines for 1901-1902, Hobart, Tasmania, Mineral Resources Tasmania

With the onset of the Great War, James was commissioned into the Royal Engineers, and served at Gallipoli, Serbia and Salonika. He was awarded the DSO in 1916 and an OBE in 1918 and was three times mentioned in dispatches.[14] On leave in 1917, he was commissioned by the British Admiralty to design and supervise the construction of a 1000-ton concrete ship which was launched just before the Armistice. Nevertheless, the ship was used for many years in the Baltic and White Seas without any signs of leaks.

In 1921, he was sent by the British Government to evaluate assets in Iraq, and in 1924 was commissioned to survey and supervise construction of a railway in northern Spain. It was there that James was joined for a period by his brother Richard.

In 1927, James returned to his practice in Dublin, and over the following years was instrumental in developing a number of concrete construction techniques, such as Coverbond, Nofrango, Ctesiphon arches etc.,[15] [16] and presented several technical papers to the Institution of Civil Engineers.

During WW2, Major Waller was retained by the British Government for technical services in connection with buildings of various types.[17]

After the War, James retired to Totnes, Devon, and it was there that he penned his unpublished autobiography in 1947.

Major Waller was elected as a Corporate Member of the Institution of Civil Engineers in 1924 and was transferred to Fellowship grade in 1927. He retained that grade until resigning in 1965, at the age of 81.

He died at Totnes on 9 February 1968. He was 83. He had come a long way from Glenlusk, from a Sydney Test Match, and from the Magnet mine. His family commented that he always regretted he never got back to the land of his birth.[18]

…..to be continued

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5. Notes about the Waller family: James Waller's daughter Beatrice, 1993.
6. *A History of Railways and Tramways on Tasmania's West Coast*, Lou Rae, 1983, page 181
7. Also spelled as *Kunderang*, or several other variations.
8. weskit = waistcoat
9. Galena, PbS: the most common and important ore of lead, often associated with silver, as was the case at Magnet.
10. *A history of Railways and Tramways on Tasmania's West Coast*, Lou Rae, 1983, page181.
    [Details of the Magnet mine and its tram were sourced from a number of references, and although some contradictions were found, this account is regarded as generally reliable.
    The most comprehensive coverage was that of Lou Rae in his *A history of Railways and Tramways on Tasmania's West Coast*, pages 180 – 184 inclusive, but other references proved to be relevant:
    a. https://www.mindat.org/loc-184.html
    b. Mineral Resources Tasmania, Magnet Mine fossicking area
    c. *The Companion to Tasmanian History*, Mining: Centre for Tasmanian Historical Studies, UTAS –2006
    d. *Exploration Drilling at the Magnet Ag-Pb Mine, Tasmania*, A. E. Webster, November 2007
    e. *Magnet. The Rise and Fall of a Tarkine Mining Town*, https://www.magnettours.com.au]
11. https://www.dia.ie/architects/view/5490/waller%2C+james+hardress+de+warenne
12. *Waller, James Hardress de Warenne, Dictionary of Irish Architects*, and *Proceedings of the Institution of Civil Engineers*, October 1968 pp 443-444
13. http://www.delapandwaller.com
14. *Lives of the First World War*: James Hardress de Warrenne Waller
15. *An Irish Genius: JH de W Waller 1884-1668*, Williams J, *Irish Arts Review*, page 143
16. *Research on James Waller*: Paper presented at the 4th International congress on construction history and the 2nd International Conference on Flexible Formwork, Shotten, Elizabeth, 2012
17. *Proceedings of the Institution of Civil Engineers*, (Obit), October 1968 pp 443-444
18. Family correspondence: James Waller's daughter Beatrice, 1993

Pat Byrne is seen here at the home farm derrick during the 1950's tractor hauled era. *Photo: Byrne family, Stotts Creek collection*

The private sugar tramways of Stotts Creek, NSW

by Peter Cokley

Introduction

This article examines some private Tweed River sugar tramways in Northern NSW. It traces the tramway histories that led to one farmer obtaining a Simplex locomotive and another purchasing a Caldwell Engineering (Australia) locomotive for their private cane tramways, due to the 4km haulage distances. One tractor hauled cane tramway belonged to the Byrne family started by their wharf near Stotts Island and ran for about a kilometre from their river punt derrick and wharf through their own cane paddocks and dates from around 1950. The river punts carried the cane to the Colonial Sugar Refining Company's (CSR) Condong mill, 12 km upstream near Murwillumbah.

The CSR punts finished in 1959 as CSR expanded its system to the previously isolated Cudgen Plateau tramways, with its Chinderah punt wharf, to the east. This 1959 line extended the mill line from the Tumbulgum area in the west and meant the end of CSR's Chinderah tramway wharf and punts in this region. As the 1959 CSR Cudgen Plateau line passed through Stotts Creek, the Byrne family organised an exchange siding where its earlier private 1950 line met the new 1959 CSR Cudgen line. This gave them a cane outlet straight to the mill, instead of the punts. A glance at the map shows a group of private lines to the north, around Maher's Farm, including a short branch across to Douglas Richardson's Dodds Island cane farm. These lines were built as Maher's Farm and Dodds Island previously fed cane to the mill via punts but required a tramway to be built once the punts finished. The Tweed district people interviewed for this article did not recall any tramways, either permanent or portable, around that Maher's Farm and Dodds Island area in the punt era.

Local History

The Stotts Creek district is the very broad general area near Stotts island, with Dodds Island perhaps more in the Chinderah district. The accompanying map also shows CSR's 1894 – c1906 Duranbah sugar cane tramway. This horse operated line went from CSR's Duranbah wharf on Stotts Channel, up and along the Duranbah ridge. That Stotts Channel, also known as Stotts Creek in the early days, separated Stotts Island from the mainland, thus the district's name. On a side point, many creeks in the district were redeveloped as drainage channels with the various swamp drainage schemes that resulted in extra cane land. More details on the CSR Duranbah line are in the author's article in *Light Railways* 267 of June 2019.

Some pictures seem to caption any wharf in the wider Stotts Creek district as the Stotts Creek wharf, suggesting it was a generic name for any nearby mooring site, regardless of size and purpose. The Stotts Creek public wharf itself was at the Byrne's property. Ted Byrne identified the public wharf as about 140 metres north from the house, with the wharf on the southern side of the drainage canal seen in Google Earth. In that era a public access road led from the highway to the public wharf, with the 1950 Byrne tramway later built on part of this former road space on the southern side of the canal. The public wharf traffic included ocean going coastal ships for Sydney. In 1929 the North Coast Steam Navigation Co's SS *Tyalgum*, a 544 tons steel twin-screw passenger cargo vessel, was

photographed unloading cement at Byrne's public wharf for the concrete road project on what became the Pacific Highway. The pre concrete road through the nearby swampy areas was formed by the corduroy method of logs covered with roadbed.

The Byrne public wharf also catered for smaller local Murwillumbah and Tweed Heads river transport such as Skinner Lowes and Co's vessels, whose boats carried mail, passengers, and light freight. The Stotts Creek Post Office was part of the Byrne's house, with pictures of the Post Office sign on that house in the Byrne family collection. Mail came via the Stotts Creek public wharf in the river traffic days, and later by the bus service. Trove records show that Mrs Hannah Byrne as an early Stotts Creek post mistress and family members took over after her retirement, till its closure in 1966.

Both the Pacific Highway's former route and its present route as the Pacific Motorway needs explaining to help identify tramway features. The Pacific Highway was rebuilt as the Pacific Motorway in 2002 on a new route to the east, with a tunnel under Cudgen Rd. The highway references in this article refer to it as it was in the sugar tramway era. That former Pacific Highway through Stotts Creek, Tumbulgum, and Condong to Murwillumbah, is now the Tweed Valley Way, with the junction between the Motorway and Tweed Valley Way involving a flyover ramp just north of the Motorway's Caltex Service Centre on the northbound side of the motorway. The Melaleuca Station Memorial Gardens and Crematorium, which was the former Melaleuca Station tourist tramway building and site, adjoins the southern side of that Motorway Service Centre. The private 1967 eastern tramway extension would have crossed the highway near this road junction flyover, with Oak Avenue being the local name for the Pacific Highway. As such, that 1967 private tramway branch and its linked CSR tracks was known as 'Oak Avenue' or 'Avenue' tramway branch. One local story refers to 'Oak Avenue' as a World War 1 memorial. Other sources, including Ted Byrne, note his area's natural swampy area vegetation was tea tree and swamp oak anyway.

Regarding general Stotts Creek district location features, Dodds Island and Stotts Island are Tweed River islands. Dodds Island, the northern of the two islands, had Douglas Richardson's cane tramway, and not to be confused with Stotts Island, the whole of which was a state gazetted nature reserve for the past century and more, thus it was not a cane farm. Tweed Heads is the main town to the north and Murwillumbah is the main centre to the south. Chinderah is the adjoining district to the north and Tumbulgum to the south.

Byrne Family

The Byrne family was initially linked to the Tweed sugar industry via the Abbotsford Sugar Mill, near Tumbulgum dating from c1875. While the initial partnership, including Pat Byrne, was dissolved about 1883, this mill is understood to have lasted much later. Certainly, CSR's nearby elaborate Condong mill, which started crushing in August 1880, applied pressure on the viability of the Abbotsford Mill. More on the Abbotsford Sugar Mill and its wharf tramway can be found in the author's article on Robb & Co's Cudgen mill operations in *Light Railways* LR 265 of February 2019.

The Pat Byrne of Abbotsford Mill fame acquired land at Stotts Creek in 1881. Ted Byrne related that his grandfather Pat's Stotts Creek accommodation was somewhat basic, with Patrick's 22 January 1888 marriage to Hannah Maher, of the Maher's farm family, resulting in the construction of a more suitable home. This house still stands, although since expanded and raised above flood level. Hannah was aged 19 at her marriage and Patrick was around 48. Maher's Farm, originally obtained by Hannah's parents in 1869 and sold to the Brinsmead brothers by the Byrne family in 1963, has a mainly dairy history, being leased to a succession of dairy farmers. Ted Byrne recalls that around his grandmother Hannah's 1955 death, the dairy lease ceased, and they switched to cane.

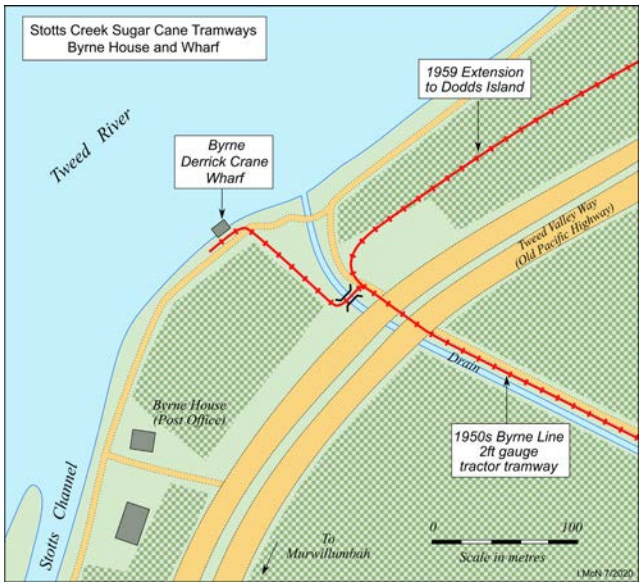
This article generally uses the term 'Byrne family' rather than identifying every family member involved every time. One name that may need clarifying is 'Pat Byrne', as there was more than one, the first being Ted's grandfather of Abbotsford Mill fame. Another was Ted's brother Pat Byrne, occasionally mentioned in Tweed tramway research literature. For the record, the Caldwell Engineering locomotive was purchased by JA Byrne & Sons and on-sold to the Brinsmead brothers by the same family company. This comprised Ted's father Joseph Alphonsus Byrne (1898 – 1983) and two of Ted's brothers Pat and Jack, thus the JA Byrne & Sons name. Over time there were other versions of the Byrne family's trading names. As of March 2021, the Byrne farm still operates as a cane farm in multiple Byrne family members' names. The Byrne family name is spelt without an 's' on the end.

Sugar farming families

Maher's Farm was owned by the Byrne family, having originally being owned by the Maher side of the Byrne family since 1869, thus the farm's name within the Byrne family. One complication was non Byrne families owned the area

between Maher's farm and the main Byrne farm to the south, and so Maher's farm was separated from the main Byrne farm. Two family owned lines are marked on the map from Maher's Farm, with one heading south beside the river marked as 1959, and the other eastwards and dated 1967, with the 1967 line replacing the 1959 one. The line marked as 1959 ran down to the main Byrne farm and then along the original Byrne tramway to the exchange siding with CSR's mainline. That gave the outlet for the cane from Maher's farm and Dodds Island, replacing river punts. Due to the 4km distance down to the main farm and exchange sidings, the Byrne family purchased a Caldwell Engineering locomotive and shared it with Douglas Richardson. Later Douglas purchased his own locomotive, a Simplex, for his Dodds Island cane. While the 1967 line near Maher's farm is detailed later, it is worth pointing out it meant the retirement of the Simplex and Caldwell Engineering locomotives as the new line reduced the haulage distance and tractors replaced them. Other tramway features on the map are detailed later.

In 1963 the Byrne family sold its Maher's Farm, with the sale including the Caldwell Engineering locomotive and tramway associated with that farm. The new owners, John and Noel Brinsmead, then combined Maher's Farm with other nearby land they purchased, into the Riverside Plantation. Regarding the Riverside Plantation name, and updating previous articles, John Brinsmead told the author in March 2020 it was Brinsmeads' own commercial trading name, not a Byrne sourced name. John Brinsmead said he and his brother Noel worked the Byrne's former 120 acre Maher's farm as just a small part of Riverside Plantation, which John Brinsmead said eventually totalled several hundred acres. Stotts Creek cane farmer, Ted Byrne, gave similar advice to the author in 2019 when he said his family never used the Brinsmeads' own Riverside Plantation trading name to describe the Byrne Tramway, nor locomotive, nor Maher's Farm, while in Byrne family ownership. In particular, the sale meant the Caldwell Engineering locomotive and trackage was no longer part of the Byrne Tramway after 1963, and instead became part of Brinsmeads' Riverside Plantation Tramway.



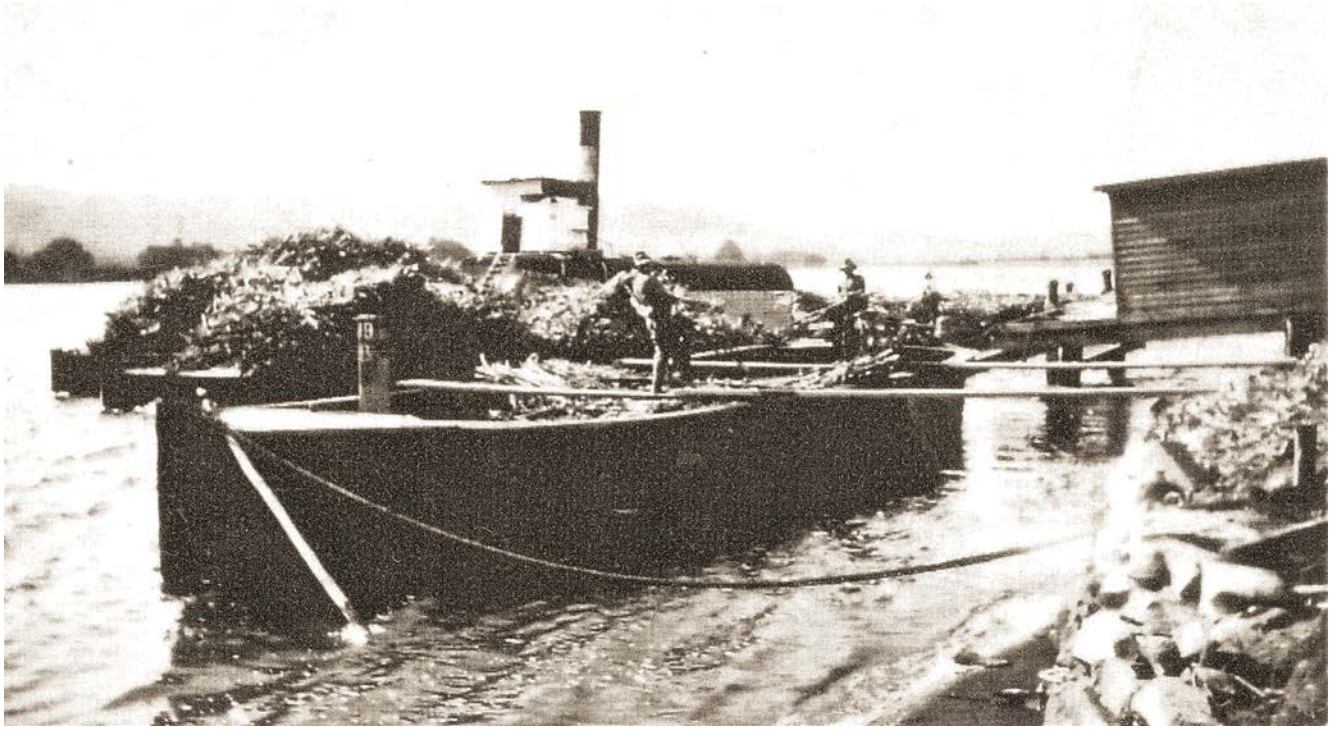
Early Byrne Cane Transportation

Pictures show the main Byrne public wharf area, which included a shed, also included some sugar punt mooring piles. In the early days horse drawn tipping drays, termed jinkers, carried the cane to the river bank. This cane was tipped onto two parallel logs to keep the load off the ground, which made it easier to grab a bundle, often with a shin stick or flank, which was a stick a couple of feet long. You would put the shin stick under a bundle, what you could carry on your thigh, and walk along a plank to the punt.

Once it was cut, the sugar cane sticks were tipped onto two parallel logs and then collected manually using a "shin stick" and carted onto the nearby punt. Photo taken in 1914. *Photo: Byrne family collection*

Loading cut sugar cane onto a punt using a "shin stick" in 1914. The Byrne family house and the Post Office is in the background.
Photo: Byrne family collection

Later a derrick was installed on the river bank near the wharf and its initial manual winch carried the plate from Harvey & Sons, Engineers, of Margaret St Brisbane. In turn it was replaced by a motorised winch powered by a mid 1920s Dodge car engine. The public wharf use diminished with the end of both the coastal shipping and river traffic, and the focus was more on sugar punt mooring piles near the derrick. The wharf was gone by 1961 according to an aerial image. The 1950 tractor hauled tramway left the wharf area and crossed to the northern side of the canal by a small bridge. The 1961 aerial image shows two farm bridges between the highway and the river, one near the highway and another near the river, with Ted Byrne noting the now demolished tramway bridge was the one near the highway. The 1950 line crossed the Pacific Highway by permanent rails set into the road surface, rather than temporary rails some farmers laid on top of the road surface during the crushing season. This article's maps only show permanent tracks, while temporary paddock rails fed these permanent lines as required.



Cane barges being loaded manually at the Byrne public wharf using "shin sticks". The tug boat Leander *is in the background.*
Photo: Byrne family, Stotts Creek collection

Above: *The Cudgen plateau extension was constructed in 1959 and shown here is the Ruston and Hornsby locomotive towing a train of wooden side ballast wagons. Photo: Reference Tweed Regional Museum TH 137-26*
Right: *Another view of the works train constructing the Cudgen plateau extension. Photo: Tweed Regional Museum TH 137-27*

Stotts Creek cane farmer Allen Quirk recalls that his family also used the Byrne's derrick in the pre 1959 CSR Cudgen Plateau mainline era. The Quirk's farm trailers would have used the Pacific Highway for part of their mile or so trip north to the Byrne's derrick. Allen recalls the 1959 CSR Cudgen tramway extension, which passed through his property, resulted in their farm increasing their cane areas and similar increases by other farmers.

1959 Maher's Farm and Dodds Island Line

As mentioned, the 1959 CSR mainline to the Cudgen Plateau meant the end of the river punts and the need for the 1959 private line linking the main Byrne farm area to Dodds Island. It also meant the Byrne family purchased the Caldwell Engineering locomotive for the 4 km haulage from Douglas Richardson's Dodds Island to the 1959 exchange sidings. Ted Byrne recalls his family, with help from Douglas, laid the rails and cut the sleepers themselves. The map shows the private line from Dodds Island met the 1950 line on the northern side of the drainage canal near the Byrne Wharf. A tramway right of way lease was secured with the other landholders through the non-Byrne family land which long term Tweed sugar industry locals recall as mostly tea tree and grass lands used for cattle etc. These days it is largely cane and tea tree land. The present day boat building business, seen on Google Earth, appeared in the mid 1970s, with the drainage canal on the southern side of the boat factory marking the northern edge of the main Byrne land. CSR track plan 56281 shows both the 1950 Byrne tramway, and the private 1959 line between the river and the highway up to Dodds Island, as 'Horse Lines'.

Stotts Ck private tramway traffic was determined by whose cane was being harvested by the cane cutting gang in the local area rotation. For example, the gang cut a set percentage of the Byrne crop for a few days, then perhaps the same cane gang would move to the Brinsmead crop, then a few days later the Dodds Island crop, and so on with the other farms in that district's roster. There would be several harvesting rotations through each owner's crop each season. The mill would have this all organised, including dropping off the required empty wagons and the collection of the loaded wagons from the exchange sidings.

1959 Cudgen Line

Tweed sugar locals from that era note the 1959 CSR-built 7 km extension to Cudgen Plateau started west of Stotts Island, with the earthworks contractors remembered as the Russell Brothers. This CSR extension included an open level crossing on the river flats at the western end of Cudgen Rd, near the junction with present day Tweed Valley Way. The people interviewed also recall the quarry used for the extension was near the river end of Cudgen Rd, in the ridge just north of the level crossing, as marked on the map. A short tramway spur led into the quarry. Converted sugar tramway wagons were used as ballast wagons by the addition of box like wooden sides and ends, with the conversion done by Joe Smith, one of the local people interviewed for this article. Joe described the wooden corner posts as 3x3 inch and about 5 ft 6 in high and the sides around 3 ft 6 in high. The ballast wagons were flat bottom and not V-shaped like some other ballast wagons. One of the sides had a bracket so it could be lifted out, allowing the gravel to spill out and the rest shovelled out to the sides and then under the wagons. The wagons were loaded at the quarry by a dozer pushing the gravel into the wagons via a 'Chinaman ramp' which was dirt over a log ramp to allow the dozer to get higher than the wagons. Ted Byrne relates the CSR extension through the Byrne's paddocks was mostly straight instead of going around the boundaries of cane paddocks. While that benefited the cane haulage, it also resulted in cane fields having awkwardly shaped segments. The eventual replacement of the tramway with road haulage solved this cumbersome paddock arrangement.

Caldwell Engineering locomotive

The Caldwell Engineering locomotive used at Stotts Creek was built in 1942 and fitted with a Fowler of Leeds UK 2-cylinder diesel engine. The locomotive was a 4wDM style, revealing it as a 4 wheel (two axle) diesel mechanical (DM) unit. It originally worked on the Titanium Alloy Manufacturing Company's (TAM) sand mining tramway between Casuarina and Bogangar, on the coast south of Kingscliff NSW, and was sold to Philip Peachey of Peachey Constructions, a machinery and construction firm of Ormeau, south of Beenleigh in Queensland. More on that sand mining tramway and the Caldwell Engineering locomotive's early history can be found in Jim Longworth's '*The Titanium Tramway at Cudgen*' in LR 207 in June 2009. The Ruston and Hornsby locomotive seen in the Cudgen Plateau line construction picture was one of two Ruston and Hornsby units on that same TAM tramway, both having been sold by the sand miner to CSR who later added cab roofs.

In turn, Peachey Constructions onsold the Caldwell Engineering locomotive c1960 to the Byrne family (JA Byrne & Sons). Ted Byrne recalls It was stored in the off seasons under a tarpaulin on the tracks. Updating earlier reports, the image of the Caldwell Engineering locomotive shows its *Duggie* name on the cab rear, with that spelling as seen in the picture. That image is dated c1960 by the Byrne family, before the sale to the Brinsmead's. Ted Byrne recalls the Caldwell Engineering locomotive had the name *Duggie* because part of the then cane load came from Douglas (Duggie) Richardson's Dodds Island, that being before Douglas acquired his own Simplex locomotive c1961. The Caldwell Engineering locomotive was repowered with a four-cylinder International Harvester TD-6 diesel engine in 1964, after its 1963 sale to the Brinsmead Brothers. Ted was aware of that as his family did the mechanical engine change over work for the Brinsmead Brothers, and so the discarded Fowler engine ended up on the Byrne farm, while the re-engined Caldwell Engineering locomotive continued to work on its owner's (Brinsmead) tramway. The Byrne family had no need for a locomotive once Maher's farm was sold in 1963 to John and Noel Brinsmead, as the only Byrne tramway remaining was their original 1950 line and tractors sufficed for that. Obviously, the Brinsmeads' Caldwell Engineering locomotive and Douglas Richardson's Simplex locomotive continued to pass through the Byrne cane fields every time they took a load to the Byrne exchange sidings, till the 1967 private line replaced the earlier lines.

Following the Simplex and Caldwell Engineering locomotives' retirement after the 1967 private line's construction, Ted Byrne noted both locomotives were placed in storage on their respective owner's property, with neither stored on Byrne's farm tramway. David Mewes photographed the retired Caldwell Engineering locomotive in November 1974, although unfortunately that photo in *Light Railways* 104 incorrectly gave its 1974 location as 'Byrne's farm'. Instead, its actual location was on Brinsmead's Riverside Plantation. The point being that the 1974 photo was a decade after the Byrne family sold Maher's farm, including the Caldwell Engineering locomotive and associated trackage, to the Brinsmeads. John Brinsmead told the author in 2020 that the retired Caldwell Engineering

Peachey Constructions garage at Ormeau – undated.
Photo: Byrne family collection

locomotive was stored on his and his brother Noel's Riverside Plantation till sold to the Gold Coast Sea World theme park in 1975, with that 1975 sale date from John Brinsmead himself. This also updates some earlier accounts.

Jim Longworth has prepared an excellent article for *Light Railways* titled "Caldwell Vale and Purcell Engineering industrial locomotives – an overview". Part 1 of the article was published in LR 278 in April 2021 and Part 2 will be published later this year. In Part 2, the further fate of the Caldwell Engineering locomotive will be discussed and it will reveal that Sea World reused the locomotive frame to support the body of an American looking steam outline locomotive, numbered 99, complete with diamond smoke stack and cow-catcher. Eventually Sea World operated three locomotives on its now closed internal tourist line. In 2016 the Caldwell Engineering steam outline rebuild was consigned by road transport, reportedly to Sydney, possibly initially to the former Adventureland site in Edmondson Park.[1] The locomotive is understood to currently be in the Blue Mountains on a private railway, as per Jim Longworth's article.

The Caldwell Engineering locomotive's builder's number has been debated in past issues of *Light Railways*. One source mentions 646, but David Mewes, who also noted the builder's plate as 'Caldwell Engineering Marrickville' in November 1974, wrote in *Light Railways* 104 there were no other means of identifying the loco and he could not confirm 646 is really the builder's number. Felix Caldwell registered the name Caldwell Engineering (Australia) in 1932, which is not to be confused with his earlier engineering activities at Caldwell Vale Motor & Tractor Construction Co Ltd of Auburn in Sydney, and other firms including Armstrong-Holland. David Mewes' builder's plate data traces the locomotive to the Marrickville, Sydney, firm, not the earlier Caldwell Vale business connected with the same Felix Caldwell in a very different time fame.

The Caldwell Engineering original Fowler two cylinder engine at the Byrne farm shed in 2019 – note the green fuel tube at the top left.
Photo: Peter Cokley

Caldwell Engineering locomotive Duggie *at Byrne's home farm. The hand written caption on the back of the original photos states "Byrne family loco used for haul cane from bottom farm. Now owned by Brinsmead to mainline on home farm circa 1960". A two-row planter and an Allis Chalmers crawler is in the background.*
Photo: Byrne family, Stotts Creek collection

Above: *Caldwell Engineering locomotive showing the chain drive – location unknown. Photo: State Library of NSW via John Browning*
Left: *Caldwell Engineering locomotive at Cudgen in 1952. Photo: Wal Larsen via John Browning*
Below: *Close up photo of the Caldwell Engineering locomotive* Duggie *Photo: Byrne family, Stotts Creek collection*

The question of whether the Tweed River Caldwell Engineering locomotive was petrol or diesel was explored and John Browning advised that his reading of Fowler's locomotive production list is that they did not make petrol engines. The engines fitted to its petrol Fowler locomotives (such as CSR's Condong sugar mill) were American Waukesha units. Fowler fitted diesel engines of its own manufacture to locomotives from 1932 until it ceased making the engines in 1950.[2] The picture of the discarded Fowler engine after being replaced by the International diesel engine in 1964, proves a Fowler engine was used in the 1942 built Caldwell Engineering locomotive, so a diesel unit. Felix Caldwell himself noted the Tweed district unit was a diesel when he wrote in 1961 to WW (Bill) Henderson;

> More recently I designed and built two 5 ton diesel locos for the Water Board here which gave good service on various jobs in NSW. A similar one was supplied by me through William Adams to some firm mining rutile near Tweed Heads.[3]

The earlier mentioned Bill Henderson retired from Queensland Railways in 1981 as Engineer for Design and Construction, so would have been professionally aware of locomotive components.

Dodds Island

Dodds Island and its cane farm was separated from the 'mainland' by Boyds Channel, sometimes described as an anabranch of the Tweed. A trestle bridge towards the western end, visible in a 1961 aerial image, linked Dodds Island tramway with Maher's Farm. Ted Byrne relates this bridge was built by CSR for the 1959 private tramway. The permanent rails extended for around 50 metres or so onto the island, with temporary tracks beyond that. The present bridge over Boyds Channel is a rebuilt version. As the bridge and tramway to Dodds Island did not exist in the punt era, Douglas Richardson used his own small flat top barge to cross Boyds Channel. Ted Byrne described the hand winch operated barge as basically a deck on a series of 44 gallon drums and large enough to carry small farm vehicles, fuel or fertilizer etc. Larger items were transported on cane punts with a deck conversion to fit whatever was required that trip. The 44 gallon drum based punt replaced an earlier version. As mentioned, Maher's farm swapped from dairy to cane in the late 1950s so needed a cane punt derrick till the 1959 tramway was in place. Ted remembers Maher's farm's derrick was near the western end of Boyds Channel, with Douglas Richardson's derrick further east along Boyds Channel on the island side. The people interviewed for this article recalled that the CSR punt tugs accessed these derricks via the western end of Boyds Channel. As mentioned earlier, these people also did not recall any tramways, either permanent or portable, around that area in the punt era. Douglas Richardson purchased the complete Dodds Island around the late 1950s and the island had previously gone through various owners, at one stage having different owners for the eastern and western areas. Douglas sold Dodds Island to Harold (Hank) Hancock c1969, with the tramway continuing after the sale.

In 1961 Douglas Richardson purchased 4wPM Motor Rail 'Simplex' 4160 of 1926 from Condong sugar mill and fitted it with a petrol engine from a Dodge motor vehicle. Ted Byrne said the Caldwell Engineering locomotive could out haul the Simplex as it could lose traction, especially in wet muddy times, so Ted recalled the Simplex continued in service with small sand containers (dippers) kept handy. Naturally, the loads were adjusted to suit the prevailing conditions. Researcher John Browning mentioned that the Simplex was sold to John Hall of the Gold Coast around 1973/4.

1967 Extension

Also marked on the map is the c1967 tramline built by Douglas Richardson and the Brinsmead brothers, heading east from Dodds Island for about 1.5km to the 1959 CSR side branch, as marked on the main map. In October 1974, the last year of Condong's tramway, researcher David Mewes travelled on and recorded notes on the regular evening tramway run from the Condong mill to the Cudgen Plateau area. As the Byrne traffic had converted to road haulage by 1972, their exchange sidings were not mentioned in David's 1974 account. David Mewes wrote that the CSR 1959 branch, with its 1967 private extension, was termed 'The Avenue Branch' as the 1967 component crossed the previously mentioned Oak Avenue, that portion of the Pacific Highway in the Stotts Creek area. The Avenue Branch was described by David's 1974 notes thus so; 'As with the rest of the tramlines we had traversed, 'The Avenue Branch' was lightly laid and quite rough.' David mentioned that the CSR locomotive limit was the exchange sidings loop just before the level crossing over the Pacific Highway. That would mean CSR locomotives would have traversed some of the 1967 private line to reach that point. The track ownership change

"Wallaby Jack" re railing tool in the family shed.
Photo: Byrne family collection

point marked on the map was identified by the local sugar cane identities. That ownership change point also matches the end of the 1959 northern CSR branch as shown on CSR track plan 56281, with amendments noted to March 1962, as well as CSR's track plan 54743, updated to April 1966. The people interviewed recall the 1967 built private line, like the main Byrne 1950 line to the south, crossed the Pacific Highway by permanent rails set within the road surface, not temporary rails laid on top of the highway. The locomotive for David's 1974 trip was 0-4-0 DH EM Baldwin No.9.

This CSR Avenue Branch's junction with the Cudgen mainline was described as the Cudgen marshalling yard in David Mewes' notes. The main line then climbed up to the Cudgen Plateau. David recorded that the main line passed through Cudgen marshalling yard with a passing loop either side of the main track. As well as Avenue Branch's traffic, the yard was used to marshal smaller loads from the main Cudgen area into larger trains for the trip to the mill, hence the Cudgen marshalling yard name. The size of the initial loads from the Cudgen area was governed by what could be managed over the Cudgen Plateau ridges and down the grade to the Cudgen marshalling yard on the river flats below.

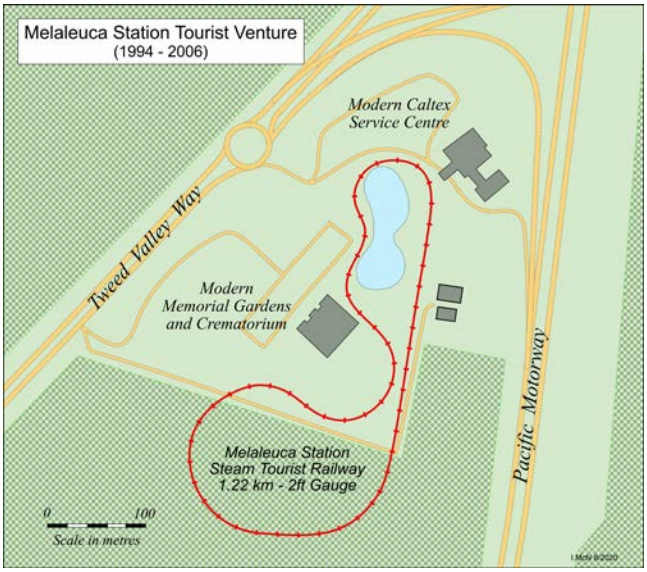
The rail for the 1967 private extension was described by the people interviewed as 'heavy rail' and said it was certainly heavier than the usual CSR rail, with QR named as the source. John Brinsmead revealed the rails were from the former Queensland Railways (QR) Tweed Heads, Coolangatta / Nerang line, which closed in 1961, and specifically mentioned the Coolangatta Tugun segment. That was laid with 61 lb /yd rails in 1903. This matches a Tweed Heads Historical Society publication, which quoted a 1985 newspaper article regarding Tweed district real estate agent, Adrian Maher, of A J Maher Real Estate. Adrian stated that in 1963 he took an option on

the rails in the 12 km segment of QR's Tweed Heads line back north towards West Burleigh. Maher said he sold the rails to the cane farmers and carted the rails to the Tweed in sand mining trucks, which were returning empty from Brisbane.[4] The QR dismantling train was recorded by rail historian John Knowles eventually crossing the Currumbin Creek Bridge heading towards West Burleigh, on 15 January 1964. That would mean the Tweed / West Burleigh rails were available around 1964 and so would fit the Stotts Creek time frame. But that 12 km indicated by Adrian Maher is considerably more than the approx 2km used by the 1967 Richardson / Brinsmead private line, suggesting the rest was used for sundry mill tramway repairs elsewhere in the Tweed district.

Two main reasons for that 1967 private line were given by John Brinsmead. The first reason was the 1959 line built between the river and the highway from Dodds Island down to the Byrne area was not coping well with the increased tonnages from the extra cane areas developed by the Brinsmead Brothers. The other reason was the highway level crossing safety. John said the level crossing near the Byrne wharf area was on what he termed a dangerous bend, remembering this was before the 1970s highway upgrade. John Brinsmead recalled by that stage big interstate buses and trucks were coming down the highway at him at speed as he took loads across. The new 1967 level crossing had far greater visibility. John Brinsmead said the retirement of both private locomotives was achieved once they had tractors able to cope with the heavier loads over the now shorter haulage distance. In the end John said they managed to get all of one day's load across in one highway crossing with tractors. Traces of the 1967 highway private level crossing area are long gone as the area was extensively bulldozed for the 2002 Pacific Motorway junction with the former highway, Tweed Valley Way. Similarly, the four lane highway near the Byrne wharf removed remnants of the level crossing in that area.

Cox Tramway

Sam Cox's farm adjoined the southern side of the main Byrne farm, and his tramway, like the original Byrne line, dates from c1950 and hauled cane to his river derrick for loading into punts. Sam's line was on both sides of the highway and on the northern side of Cudgen Rd, with portable lines crossing the highway, being laid and removed as required so as not to disrupt road traffic. The possible track distance was estimated as several hundred metres. Following the 1959 cessation of the punts, the Cox empties were dropped off from the mill at the Byrne exchange sidings and the loaded wagons collected by the mill locomotive from there as well. A farm tractor hauled the Cox traffic along the CSR line, via temporary points and track, between the Byrne exchange sidings and the Cox paddocks. Sam Cox's daughter Jan Stuckings and her husband Kevin related to the author that the Cox derrick was in the northern end of Stotts Channel, the waterway beside Stotts Island. They also related that nowadays due to silting etc you would be flat out getting a row boat in Stotts Channel, but back in the punt era they had punts side by side plus the tug in Stotts Channel at their derrick. They remembered how farmers would share equipment, especially specialised items that were only needed for a small time. Sam Cox sold to the Chaffey family in the 1960s, with some land on-sold to the Byrne family c1976. The tramway continued after the sale to the Chaffey family.



Eglington Tramway

A short 'horse line' was shown on CSR's track plan 56281, updated to March 1962, so the line existed by then. Both Ted Byrne and Joe Smith, who built the ballast wagons for CSR's 1959 line to Cudgen Plateau, recollected in 2020 that it was a tractor hauled permanent line that ran south to the CSR mainline. They recall this line for the Eglington family who were Tweed area share farmers, although no other tramway details are known. Only the northern portion of the line as shown on the map was on the CSR plan. As that matched a road reserve on the 1974 Cudgen parish map, the southern portion is only an estimation of a likely route to the CSR mainline party using other road reserves on the Cudgen parish map. Locals recall the approximate northern end of the Eglington line as the present day Melaleuca Station area.

Melaleuca Station

Melaleuca Station, a steam hauled tourist tramway, operated in the district, although a couple of decades after the closure of the sugar tramway. Its location is easy to define as these days the same building has been rebuilt as the Melaleuca Station Memorial Gardens and Crematorium. The track layout is visible on Google Earth's 2003 historical imagery, with large loops north and south of the main building, linked by lines to the east of the main building.

The 21 January 2012 *Tweed Daily News* of Murwillumbah described the site as a former tea tree nursery and plantation as well as a tourist attraction. It was owned by nursery operator, the Christensen family, which purchased a cane field in 1990 and then built the imposing building that now occupies the site. The Christensen's retained the property until 2002 when local identities, Don and Lyn Beck, took over. Melaleuca Station Memorial Gardens has functioned as a crematorium since 2008 when the Heritage Brothers Funeral Services purchased the tea tree nursery and tourist attraction from the Becks. The tourist operation consisted of the main building with the usual type of sales outlets such as refreshments and souvenirs etc. Also included was a sales outlet for their tea tree oil products. Two Melbourne suburban carriages were arranged as a café type seating arrangement. One, Tait 1364M, was disposed of to the Yarra Valley Railway, arriving there in March 2007. This writer's memory of several Melaleuca Station steam tram rides up to around 2006 includes a stop on the southern side for boomerang throwing activities and a pet farm animal display area. Boarding was on the northern side of the building.

Motive power was the former Marian Sugar Mill 0-6-2T Perry built locomotive, serial No.298 and works job No.2601.51.1

At Melaleuca Station on an overcast Friday 3 January 2003, sheep graze in the background as former Marian Mill Perry 0-6-2T 2601.51.1 of 1951 and its two-carriage train await their next call to duty. *Photo: Bruce Belbin*

with the order Issued 5/1949. Following sugar mill retirement, it was acquired by Tony Germanotta, near Marian, Qld, in 1983.[5] *Light Railway News* of No.100 June 1994, quoting David Mewes and Tony Germanotta, states that Tony had disposed of the Perry and two bogie carriages to Melaleuca Station, with delivery in January 1994. The Perry has since gone to Bennett Brook Railway, Whiteman Park, Western Australia, with frequent updates in *Light Railways* magazine. Peter Neve OAM reports that the track ended up at his Pete's Hobby Railway, Junee, NSW. Details of Pete's Hobby Railway are in various past copies of *Light Railways*.

Conclusion

David Mewes noted that by the final tramway season, 1974, there were no whole stick, or field trucks, as they were known at Condong, in tramway use, being superseded by approximately 100 standard CSR 4-ton chopped cane tramway bins instead. In a similar manner, road haulage with large chopped cane bins had spread throughout the main system in various stages. The people interviewed note long stalk mechanical harvesters did not really take off in the Tweed, with chopper harvesters being more successful instead. These days the mill is owned by Sunshine Sugar, which is a partnership between the grower-owned NSW Sugar Milling Co-operative Limited and the Manildra Group.

Acknowledgements

Thanks for guidance are extended to Stotts Creek cane farmer Peter 'Ted' Byrne whose family operated the Byrne sugar tramway, retired plant operator and cane mechanical harvester Clem Prichard, Stotts Creek cane farmer Allen Quirk, and hand cane cutter, mechanic, and harvester operator Donald 'Joe' Smith (1927- 2021). I am also grateful to cane farm and tramway operator Sam Cox's daughter Jan and her husband Kevin Stuckings, as well as John Brinsmead, who along with his late brother Noel, purchased Maher's Farm and the Caldwell locomotive and associated tramway from the Byrne family in 1963. These folks generously shared their time and valuable lived experiences, including a series of interviews in 2019, 2020 and 2021, and conducted tours of the sites involved. Gratitude is also extended to John Browning and David Mewes, as well as Tweed River historians Susan Cokley, Immy McKiernan and Ross Johnson. Also, thanks to the Tweed Heads Historical Society, (THHS) which is part of Tweed Shire's Tweed Regional Museum (TRM) at Murwillumbah, who also supplied much needed material. Grateful thanks are extended to Ian McNeil for the preparation of the excellent maps that accompany this article. CSR research notes, plans and images, were also used. This CSR material is from several sources, including deceased estates, and originally likely from research trips to CSR's record collection in the Noel Butlin Archives Centre at the Australian National University, (NBAC/ANU)

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Construction tramways at Upper Nepean dams

On 11 February 2021 Jim Longworth gave an excellent presentation on the tramways used on the construction of four different dams built as part of Sydney's water supply system. The presentation was part of the LRRSA members on line meeting series – details of some of the upcoming presentations are given elsewhere in this edition of LR and more details are given on the website lrrsa.org.au.

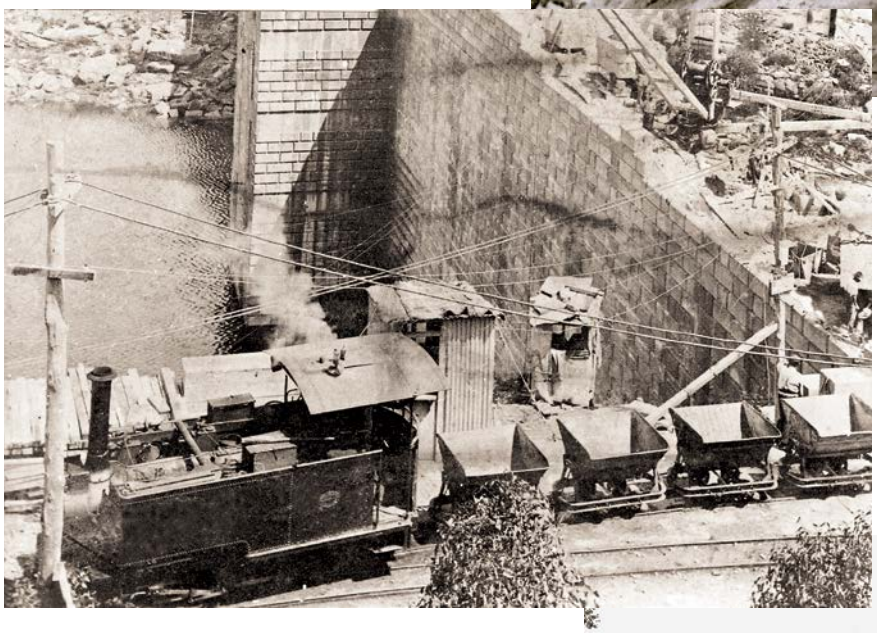
We present a selection of some of the photos used in that presentation to show the wide variety of tramways used on the construction of four dams in the Upper Nepean River area. All photos have been provided by Jim Longworth from the Sydney Water Board archives.

Further details of the tramways and locomotives used are provided in a series of articles by Jim Longworth in the July 1993, October 1993, January 1994 and May 1994 editions of the ARHS *Bulletin*.

1. Cataract Dam

Work on the Cataract Dam commenced in 1902 and was finished in 1907. To assist in the construction works, a 2 ft gauge tramway was built between the dam site and a quarry established to supply rock for concrete for the dam wall. The tramway was operated using a John Fowler and Co. 0-6-0T locomotive (builder's number 8767 of 1902).

***Right** – The Fowler locomotive with a train of skips descends to the dam site over earth ballasted track along the Cataract Creek.*



***Left** – The Fowler returning an empty train to the quarry at Sherbrooke. In the background is the dam being constructed.*

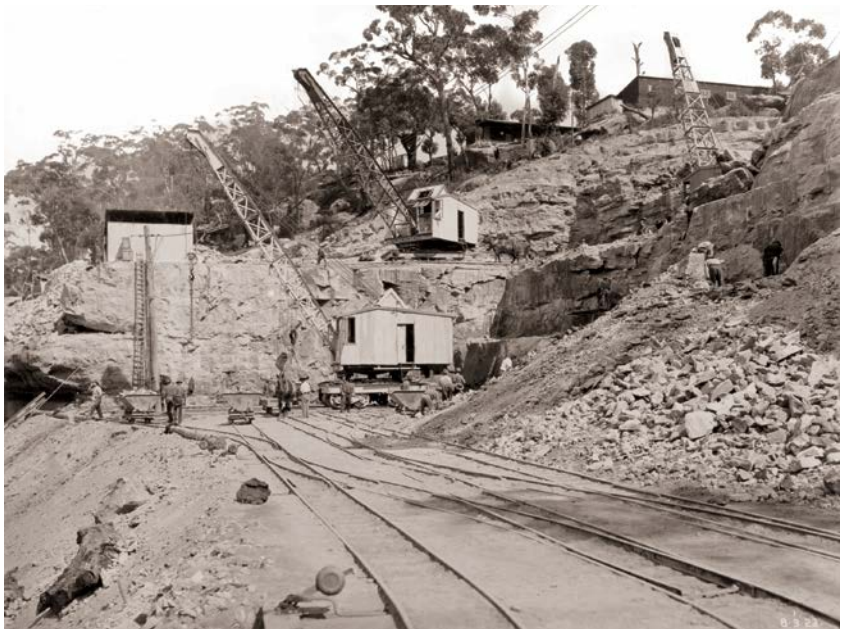
2. Cordeaux Dam

Work commenced on the Cordeaux Dam in 1918 and was completed in 1926. Materials used in the construction of the dam were delivered to the site via the NSWGR to the Douglas Park station, then via an aerial ropeway across the steep Nepean Rover gorge, then via a 9.5 mile long 2 ft gauge tramway to the dam site. The tramway was operated using two Davenport locomotives (builder's numbers 1595 and 1596 both of 1917. The photo shows the ropeway and tramway interchange which was located beside Dredge Avenue with the blacksmiths shop in the background.

3. Avon Dam

Work on the Avon Dam commenced in 1920 and was completed in 1928. The dam was located 6.5 miles from the NSWGR station at West Bargo and access to the site was via a road link. All materials delivered to the site were via road trucks. At the actual site a network of 2 ft gauge tramways was used to move materials around using men, horse and some cable haulage as the motive power.

***Right** – The concrete plant mixer house with blue metal and cement supply trucks delivering materials. On the right rock spalls are being fed into a crusher.*



***Left** – The tramway terminus at the spillway excavation which runs through the ridge to the right, and the dam wall is to the left.*

4. Nepean Dam

Work on the Nepean Dam commenced in 1925 and was completed in 1935. A 2.5 miles long standard gauge connection to the NSWGR was constructed between the Bargo station and the dam site to deliver materials and men. The "siding" was operated by an ex Sydney steam tram motor and a Purcell Engineering locomotive. At the actual site a network of 2 ft gauge tramways was used to excavate the foundations, feed materials into the concrete mixer and to deliver materials from the quarries established near the work site. The tramways used a TACL tractor with a Fordson engine as well as a Simplex locomotive.

The photo shows the Fordson locomotive (fitted with a cab) looking upstream in the river bed, and awaiting clearance to return to the mixing plant on 7 March 1928.

Industrial Railway NEWS

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

QUEENSLAND

FAR NORTHERN MILLING PTY LTD, Mossman Mill
(see LR 278 p.27)
610 mm gauge
Com-Eng 0-6-0DH *Cook* (AL3372 of 1964) was in the Cassowary/South Mossman area with a wagon load of new sleepers on 26 February.
Gregorio Bortolussi 2/21

MSF SUGAR LTD, Mulgrave Mill
(see LR 277 p.30)
610 mm gauge
Seen in the loco shed environs on 4 March were the following items of interest. Com-Eng 0-6-0DH 6 (A1006 of 1955), largely intact but missing its rods and the cranks on the front axle. EM Baldwin 0-6-0DH 11 *Maitland* (4413.2 8.72 of 1972) which appeared to be missing its final drive. Clyde 0-6-0DH 13 *Hambledon* (64-316 of 1964) and the herbicide spraying wagon which was built using the frame of a four wheeled 10 tonne cane bin. Com-Eng 0-6-0DH 17 *Deeral* (AD1553 of 1962) has previously been listed with the wrong model designation within its builder's number. It was incorrectly recorded as AD1453.
Luke Horniblow 3/21; John Browning 3/21

MSF SUGAR LTD, South Johnstone Mill
(see LR 278 p.27)
610 mm gauge
Navvy loco Com-Eng 0-6-0DM 27 (AI57111 of 1975) was seen with the ballast train at Daradgee on 9 April. It is not carrying its identity.
Gregorio Bortolussi 4/21

WILMAR SUGAR (HERBERT) PTY LTD, Herbert River Mills
(see LR 278 p.27)
610 mm gauge
Seen stabled out along the line on 13 March were Clyde 0-6-0DH locos *Ingham* (64-382 of 1964) and *Perth* (69-682 of 1969). *Ingham* was with the bridge gang in Lannercost Extension and *Perth* was on rail welding duties in Lower Stone. Hudswell Clarke 0-6-0 *Homebush* (1067 of 1914) was steamed on 16 March as part of its annual boiler inspection. Newly rebuilt Walkers B-B DH locos *Jourama* (709 of 1973) and *Cairns* (669 0f 1971) arrived at Victoria Mill on 30 March. They were rebuilt at Pioneer Mill with *Jourama* coming from the stored ex government railway locos there with *Cairns* previously being *Scott* at Invicta Mill until 2019. Both locos were placed on shop bogies at Victoria and will be fitted with the bogies from the former *Jourama* (680 of 1972) and *Cairns* (681 of 1972) locos. On 6 April, four x 4 tonne bins on road transport were seen heading south through Townsville. These appeared to be from the Herbert mills.
John Macarone 3/21; Luke Horniblow 3/21, 4/21; Editor 3/21

WILMAR SUGAR (INVICTA) PTY LTD, Invicta Mill, Giru
(see LR 278 p.27)
610 mm gauge
The Tamper STM-XLC tamping machine (94952 of 1993) was seen on loan at Plane Creek Mill on 31 March.
Carl Millington 3/21

WILMAR SUGAR PTY LTD, Pioneer Mill, Brandon
(see LR 278 p.30)
1067 mm gauge
The rebuild of Walkers B-B DH locos *Rita Island* (601 of 1969), Kilrie (604 of 1969), *Jourama* (709 of 1973) and *Cairns* (669 0f 1971) was nearing

A slack season scene out the end of the Mulgrave Mill loco shed on 4 March. Left to right are EM Baldwin 0-6-0DH 11 Maitland *(4413.2 8.72 of 1972), Clyde 0-6-0DH 16* Kamma *(56-96 of 1956) and Prof B-B DH 22* Aloomba *(P.S.L.25.01 of 1990). Photo: Luke Horniblow*

Top: *Mulgrave Mill's Clyde 0-6-0DH 13* Hambledon *(64-316 of 1964) with the herbicide spraying wagon near the loco shed on 4 March. Photo: Luke Horniblow*
Centre: *Mulgrave Mill's Rail Monitoring Vehicle near the loco shed on 4 March. Previously, it was their NQEA 6 wheeled brake wagon 2 which had been built in 1972. Photo: Luke Horniblow*
Above: *Com-Eng 0-6-0DH 6 (A1006 of 1955) outside the Mulgrave Mill loco shed on 4 March. Photo: Luke Horniblow*

completion in mid March with the latter two going to Victoria Mill on 30 March. The former two are for Invicta Mill with *Kilrie* being ex the stored locos at Pioneer and *Rita Island* previously being *Jarvisfield* at Invicta Mill until 2019.
Kieran Koppen 3/21; John Macarone 3/21

WILMAR SUGAR PTY LTD, Inkerman Mill, Home Hill
(see LR 277 p.34)
610 mm gauge
EM Baldwin 0-6-0DH *Carstairs* (6/2715.1 9.68 of 1968) went to Proserpine Mill for slack season maintenance on 23 March.
Steven Jesser 3/21; Tom Badger 3/21

WILMAR SUGAR (PROSERPINE) PTY LTD, Proserpine Mill
(see LR 278 p.30)
610 mm gauge
Unused Clyde 0-6-0DH locos 3 (58-195 of 1958) and 5 (60-218 of 1960) are still on site here with the latter having been stripped for parts. Inkerman Mill's EM Baldwin 0-6-0DH *Carstairs* (6/2715.1 9.68 of 1968) arrived here for slack season maintenance on 23 March. Invicta Mill's Tamper STM-XLC tamping machine (94952 of 1993) had gone to Plane Creek Mill by 31 March.
Steven Jesser 3/21; Tom Badger 3/21; Carl Millington 3/21

MACKAY SUGAR LTD, Mackay mills
(see LR 277 p.34)
610 mm gauge
Abrasive blasting and painting is being carried out on the spans of Marian Mill's Pioneer River bridge at Mirani. On 4 April, rail vehicles in use included a bogie cane bin frame and an ex Queensland Railways bogie wagon, which was running on 1067 mm gauge rails outside the 610 mm gauge rails.
Tom Badger 4/21

WILMAR SUGAR (PLANE CREEK) PTY LTD, Plane Creek Mill, Sarina
(see LR 278 p.30)
610 mm gauge
The 8 tonne bins from the Herbert mills were used briefly during the 2020 crushing season and were still here early in April. Invicta Mill's Tamper STM-XLC tamping machine (94952 of 1993) was working between Orkabie and Tinerta on 31 March. This machine was last noted on loan at Proserpine Mill in February. Walkers B-B DH *Koumala* QR3 (651 of 1970) was in attendance with a ballast train.
Carl Millington 3/21; Luke Axiak 4/21

BUNDABERG SUGAR LTD, Millaquin Mill
(see LR 277 p.34)
610 mm gauge
Cane from the closed Bingera Mill is to be road hauled across the Burnett River and through Bundaberg to Millaquin Mill this coming crushing season. Most will be rail hauled on the former Bingera Mill rail system with the cane bins being loaded onto semi-trailers for the hop across the river to Millaquin. By 8 April, work

Above: *Mulgrave Mill's Clyde 0-6-0DH 18* Barron *(64-379 of 1964), Hambledon Mill 6 wheeled brake wagon 11 (built using the frame of Drewry Baguley 2514 in 1990) and the Rail Monitoring Vehicle outside the loco shed on 4 March. Photo: Luke Horniblow*

Left: *Downer EDI Walkers B-B DH DH73* Hugh Boge *(718 of 1974) at the bottom yard of their Maryborough factory on 14 January. Photo: Luke Horniblow*

Below: *Featuring prominently in this photo is Victoria Mill's device used to lift and align rails for welding in situ. Heading the train in Lower Stone on 13 March is Clyde 0-6-0DH* Perth *(69-682 of 1969). Photo: Luke Horniblow*

Victoria Mill's Clyde 0-6-0DH Ingham *(64-382 of 1964) is seen stabled in Lannercost Extension on 13 March and appears to have been working with the bridge gang. Photo: Luke Horniblow*

was well underway on an interchange at Block 21 in the Fairymead area where four parallel sidings leading up to loading abutments have been laid.
Mitch Zunker 3/21; Al Nudge Geddes 4/21

ISIS CENTRAL SUGAR MILL CO LTD
(see LR 278 p.30)
610 mm gauge
The Woco Creek bridge on the new line to Duingal has been named the "Gary Ralph Bridge" after the mill's Chief Engineer who had 50 years service with the mill and who repurposed ex Queensland Railways' bridge material for six bridges on this line. A $2.5 million grant from the Federal Government will fund the building of the transloader at Childers for the Maryborough region cane. This funding is being matched by Isis Mill and 380,000 tonnes of cane from Maryborough is expected to go through it this coming crushing season. Some of the steelwork for the transloader arrived on site on 15 March. The Queensland government on 5 March committed $1.9 million to help Isis Mill purchase 36 new A lead trailers to pair with its current fleet of 40 single trailers to increase the current fleet of B doubles from 32 to 68 units. The new trailers will have cages fitted for the haulage of cane. Clyde 0-6-0DH 9 (75-812 of 1975) was started up on 5 March and moved from the sleeper shed where it has been stored for many years, to the loco shed where it was to get a service. It last hauled cane in 1999 then

saw navvy service until 2004 or 2005 and was thereafter stored. A significant exception was an occasion in 2010 when it took the welding wagon to Kowbi. The Plasser KMX-12T tamping machine (414 of 1995) was seen at Johnsons curve on 7 March.
Bundaberg Now 25/2/2021, 7/3/21; Brian Bouchardt 3/21; Mitch Zunker 3/21; Ben Glossop 3/21; Shane Yore 3/21; *Maryborough Sun* 5/3/2021; *Queensland Country Life* 5/3/2021

NEW SOUTH WALES

BLUESCOPE STEEL LTD, Port Kembla Steelworks
(see LR 278 p.31)
1435 mm gauge
The report of the demise of Clyde Bo-Bo DE T379 (64-334 of 1964) in LR 277 was premature and it was still extant on site on 1 April.
Chris Stratton 4/21

MANILDRA, SHOALHAVEN STARCHES PTY LTD, Bomaderry
(see LR 266 p.30)
1435 mm gauge
Goodwin Co-Co DE 44209 (G-6045-09 of 1971) is the regular shunting loco here with Walkers B-B DH 7315 (674 of 1971) and Goninan Bo-Bo DE D2 (024 6626 of 1967) on reserve.
Bradly Coulter 4/21

MANILDRA, NAMOI FLOUR MILLS, Gunnedah
(see LR 268 p.39)
1435 mm gauge
Clyde Co-Co DE MM02 (64-342 of 1964) and MM04 (012 4970 of 1961) are stored in the goods shed at Gunnedah.
Bradly Coulter 4/21

MANILDRA FLOUR MILLS PTY LTD, Manildra
(see LR 268 p.40)
1435 mm gauge
Clyde Co-Co DE MM01 (62-257 of 1962) and Goninan Bo-Bo DE MM03 (015 4970 of 1961) were seen parked together on a headshunt on 29 March. MM01 is on reserve for Goodwin/Alco Co-Co DE 44208 (G-6045-08 of 1971) which is the regular shunting loco and MM03 is out of service.
Nic English 3/21; Josh Noonan 4/21; Bradly Coulter 4/21

MANILDRA FLOUR MILLS PTY LTD, Narrandera
(see LR 271 p.33)
1435 mm gauge
Walkers B-B DH 7340 (702 of 1972) is still in storage here.
Bradly Coulter 4/21

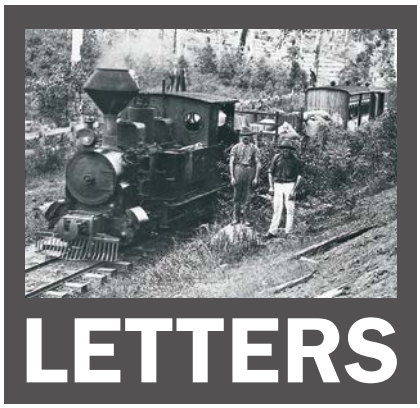
OVERSEAS

FIJI SUGAR CORPORATION
(see LR 278 p.31)
610 mm gauge
Highlighted in the FSC 2020 Annual Report was that the financial position and debt levels of the FSC would not allow it to continue without government support. Owing to washouts on the coastal section of the line to Wainikoro and Daku, cane from these areas will be road hauled to Labasa Mill during the coming crushing season. The washouts were caused by storm surges associated with Cyclone Yasa in December with Cyclone Ana in January also contributing to the damage. The washouts probably amount to around 3 kilometres in total over a 13 kilometre length of line. Some farms in these areas have previously been inaccessible to road transport.
Fiji Sugar Corporation Annual Report 2020; The Fiji Times 19/2/2021, 23/3/21; Surendra Lal 3/21

CORRECTION
(LR 276)

There was an error with the builder's number for the Walkers loco which was originally *Jarvisfield* at Kalamia Mill then Invicta Mill and is now the new *Rita Island* at Invicta Mill. In the table at the bottom of page 33 of LR 276, it is given as 610 whereas it should be 601.

Manildra Group's Goninan Bo-Bo DE MM03 (4970 of 1961) and Clyde Co-Co DE MM01 (62-257 of 1962) sitting on a head shunt at Manildra on 29 March. Photo: Nicholas English



LETTERS

Garratt locomotive at Colac, Victoria – 1935
An assessment by officers from Fyansford Cement Works (LR272)

Reading Norman Houghton's interesting submission on the above reminded me that other railways also showed interest in the VR's 'experiment' of introducing Garratt locomotives. In October 1926, with the 2ft 6in-gauge G-class Garratts barely run-in, the Emu Bay Railway Co's Melbourne directors sent their Burnie manager, James Stirling to Colac to inspect and report on G41 (BP 6267/1925). Over sixteen years earlier, Stirling has travelled to Zeehan with the TGR's commissioner and CME to watch K1 (BP 5292/1909) on its first run to Williamsford on the North-East Dundas Tramway on 12 January 1910. According to Lou Rae (*The Emu Bay Railway*, 1991), Stirling wasn't initially enamoured with Garratts.

However, by 1925-26, it was known that Electrolytic Zinc Company of Australasia Ltd (EZ) was going to be moving large tonnages of ore concentrates on the West Coast in the near future and, depending upon where EZ located their smelter, either the EBR or the TGR was going to get most of the resulting business. Accordingly, the EBR started evaluating locomotive requirements.

Whilst Beyer-Garratts may seem to be the obvious solution, they might not have been the only articulated loco being considered. Six months after Stirling's visit to Colac, the EBR Minutes of 15 March 1927, record a letter dated 9 March from Stirling as follows: " . . . received a report from Mr. Lewis to the effect that, with the exception of the Waratah bridge, all the bridges are capable of carrying Fairlie engines weighing up to 104 tons."

One very much doubts the directors were considering outdated double Fairlies as used in Mexico, Wales and the Trans-Caucasian Railway. However, I am wondering if a slick salesman from North British Locomotive Co had heard of the EBR's requirements and was pushing their so-called Modified Fairlie? The 'Modified Fairlie' (which had nothing to do with double Fairlies, except the appropriation of Robert Fairlie's name!) was NBL's attempt to gain a share of the growing market for articulated locomotives and bypass Beyer Peacock's Garratt patents.

Whilst superficially the Modified Fairlie looked like a Garratt, it actually had the front water tank, rear bunker, cab and boiler all mounted on one very long frame. The engine units were pivoted in about the usual place but the length of the single structure made it problematical on railways with many sharp curves. The South African Railways were induced to try the Modified Fairlie and put a number into service between 1925 and 1928. By 1928 sanity prevailed and the South Africans returned to normal Garratts for their future needs.

The EBR's mention of Fairlies just makes one wonder if NBL was touting for articulated business and the EBR directors had asked their civil engineer for a bridge report. The date of the EBR Minute and the recent introduction of Modified Fairlies in South Africa begs the question: Were Modified Fairlies being considered for the Emu Bay Railway? Readers' comments invited.

Phil Rickard
Ringwood, Vic.

Ringwood Colliery (LR 130 & 155)

In LR 130, Jim Longworth outlined the story of Ringwood Colliery at Bundanoon, and in LR 155 Ron Madden provided some additional information. It was pointed out that in his book "*Transporting the Black Diamond*", Gifford Eardley was in error in stating that Hudswell Clarke 297 had been at Ringwood Colliery because at the relevant time it had not yet been built.[1]

Newspaper evidence now makes it possible to confirm that there was indeed a locomotive at Ringwood Colliery. The plant was disposed of by the Sheriff in June 1885 and in September tenders were invited for the transportation of 150 tons of equipment from Ringwood to Russell Vale Colliery in the Illawarra.[2] This included a "very superior locomotive" which had arrived at Russell Vale by December.[3] Russell Vale Colliery was soon renamed South Bulli.

Jim Longworth wondered why Eardley had said that the locomotive was transported to the Illawarra overland and not by rail.[4] He was misled by Ken McCarthy's suggested date of c.1891 for the move.[5] The evidence is that by November 1885 the locomotive had been taken as far as Campbelltown by rail, and, as the Illawarra line did not open until 1888, from there by teamsters.[6]

Eardley was unsuccessful in identifying the first South Bulli locomotive, thinking that it was the Fowler from Saywell's Rockdale Tramway.[7] Fowler 5154 was in fact the second South Bulli locomotive, and was not ex works in Leeds until December 1885. In August 1887, it had lately arrived at South Bulli from Saywell's Tramway and was being readied for service.[8]

A clue to the real identity of the locomotive from Ringwood Colliery, the first South Bulli locomotive, is to be found in "*Transporting the Black Diamond*". It seems that Eardley conflated various stories gleaned from "gaffers" but a very telling description was of a locomotive with "neither a running plate nor splashers over the wheels".[9] This is a clear description of a very distinctive feature of a Neilson box tank.[10]

Two Neilson box tank locomotives came to Australia, 394 and 395 of 1857 for the Newcastle Coal and Copper Company. They left Newcastle in September 1880 for "future use in the Western district" and shortly afterwards it was reported that the Esk Bank ironworks had obtained two locomotives, which were in use by December.[11] One of the Neilsons was photographed at Eskbank as seen in LR 212.

There is no confirmed report of a locomotive operating at Ringwood, but as an injured worker was transported from the mine along the siding connecting it with the main line railway in June 1884, perhaps one was there by then.[12]

While nothing of substance can be said about the period between the Neilson locomotives' arrival at Eskbank in late 1880 and the departure of an unspecified locomotive from Ringwood Colliery in around October 1885, with the remaining evidence largely circumstantial, I believe that the chances are strong that the first South Bulli locomotive was one of the ex-Newcastle Coal & Copper Neilsons.

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John Browning
Annerley, Queensland

The Eskbank Iron Company's first passenger train!

Following his then recent return by early June 1880 from a tour of the United States, (*Sydney Morning Herald*, 3 June 1880, P7) Robert Hudson one of the principals of the prominent Sydney company, Hudson Brothers, which at the time directed orders

for its iron requirements to the Eskbank Ironworks wherever possible, met with Commissioner for Railways, Goodchap and proposed that the firm build a Palace dining car for the Government railways based on American principles. As a result, an order for the company to build same was promptly received. (*Sydney Morning Herald*, 1 December 1880 - p5) The luxurious dining car debuted in late November 1880 when NSW Premier of the day, Sir Henry Parkes, travelled by rail from Sydney to Gerogery on his way to an official visit to Melbourne. (*The Australasian*, 27 Nov 1880 - p19)

Purportedly wishing to officially launch the Palace dining car in grand style, in a move that had MP John Sutherland's fingerprints all over it, Hudson Bros invited some forty plus VIP's on a 96 mile each way rail tour comprising a day trip from Sydney's Redfern terminus to Lithgow and back on 7 December 1880 to experience the new car's facilities. (*Sydney Daily Telegraph*, 8 Dec 1880, p5) On reaching Lithgow, the special train which comprised the palace dining car, smoking saloon and a Pullman sleeping car "was run down on to the private lines of the Eskbank Ironworks, thus securing the distinction of being the first passenger train that had run over the company's rails." (Ibid) Upon alighting, the VIP's were given a guided tour of the works by Sutherland (who had travelled up on the special train) and Manager, Enoch Hughes.

Unfortunately, no details of the locomotives used appear to be available.

Ron Madden
Wodonga, Vic

LRRSA turns 60 (LR 277)

Congratulations on reaching your 60th anniversary from everyone in the Industrial Railway Society in the UK. 60 years is a tremendous achievement.

The news reports and the thoroughly researched articles published in *Light Railways* are always a delight to read.

Well Done and Best Wishes to all in Australia.

Ian R Bendall
Chairman
Industrial Railway Society
via email

Caldwell-Vale and Purcell Engineering industrial locomotives – an overview (LR 278)

Just to add a little information to the very interesting article by Jim Longworth in *Light Railways* No 278.

The photo of the Moreton Mill's Purcell locomotive at the bottom of page 11 includes the following people.

Left to right:

- George Greathead [Mill Manager]
- Unsure, likely one of the mill's directors.
- Sam Glass [Cane Inspector]
- Charles Plater [Loco Offsider]
- Unknown child
- August Stumer [Driver]

Clive Plater
Via email

Michaelis, Hallenstein & Coy, Footscray (Field Reports - LR 278)

I was very surprised and also very pleased to see Norman Houghton's field report on the Michaelis, Hallenstein tramway remains. I first came across these relics in 1978 and ever since then I have wondered what the story behind them was - now at last I know. Reading the report prompted me to dive into my old slide collection and ferret out the photos that I took of them, and in doing so I found a detail I had forgotten about.

A few months after drawing the map that appeared in LRN9 (not LRN6) I paid another visit and found the remains of a second wagon turntable in the Warde Street footpath. I think it was to the west of the turntable shown on the map, towards Whitehall Street, but my memory is not clear on this. The attached image (below) is of the two Warde Street turntable but as the slides have deteriorated somewhat (the curse of Agfa) it may not be suitable for reproduction. I have done my best to bring the colours closer to reality.

Darryl Grant
via email

Michaelis, Hallenstein & Co, Footscray Victoria (Field Reports LR 278)

The article in Field Reports sought any further information, and the following may be of interest. I was employed as a part of the team within the Department of Transport which was required to provide the land for the Regional Rail Link tracks from Southern Cross Station to Manor Junction via Sunshine and Deer Park during the period of 2010 - 2013.

Part of my property portfolio required initial and ongoing meetings with landowners of the whole of the block bounded by Ryan Street East, Whitehall St, Edward St and Moreland St. The property at the east end had been demolished and was not required. I was able to inspect the building at the western end and the central building. The latter once contained the removed rails shown on the re-drawn Darryl Grant plan. The tracks and any hint of them had been replaced by a concrete slab. Interestingly the common wall between that building and that at the western end contained a doorway large enough to drive a motor vehicle through but it had been "bricked up". Only the property at

the western end was ultimately acquired and was demolished in approx 2013 whilst Ryan St East and Whitehall were partially closed in that vicinity due to the required positioning of the six broad gauge tracks in the expanded railway cutting.

It is difficult to reconcile how the cutting and considerable (setbacks) were ultimately provided when viewed alongside the MMBW plan of 1895 which I suggest may be out of scale (final survey plans would be useful here). The numerous properties situated on the north side of Ryan St East were mostly incorporated into the said cutting and ultimately that area not required for the cutting was sold back onto the market, resulting in considerable re-development that can be seen today.

Jeff Stocco
North Balwyn
via email

Early locomotives at North Eton and Plane Creek sugar mills (LR 278)

In the caption for the photograph that accompanied my brief article, I stated that it was unknown which of the two Krauss 0-4-2T locomotives pictured, 4722 and 5679, was which. Subsequent study and information from Germany has now solved that question.

A somewhat damaged builder's photo of 4722 shows that it had a rear fuel bunker, surmounted by substantial rails to retain the wood fuel it was designed to burn. A photo of a similar locomotive with no rear bunker that appeared in the Australian Sugar Journal of October 1910 must therefore be of 5679. It is running with a tender that would have been supplied with it new and this tender has similar fuel rails to those on the bunker of 4722. A substantial amount of head scratching has been caused by the fact that another photo shows 4722 running with the same tender, while later in its life 5679 was fitted with a rear bunker.

This means that in the photo in LR 278, the locomotive hauling the rake of cane is Krauss 5679 while the one in the centre of the photo is 4722.

Caldwell-Vale and Purcell Engineering industrial locomotives – an overview – Part 1 (LR 278)

It was very pleasing to see this important story documented by Jim Longworth.

As a minor point of clarification, it should be pointed out that both photos on page 11 show the same locomotive at Moreton Mill, the lower one in its original form and the upper one following a number of rebuilds.

Cane trucks fitted temporarily with back-to-back seating were extemporised for local excursions at many sugar mills, including Moreton mill. For its scheduled passenger services to Deepwater and Coolum, Moreton used a selection of up to eight bogie passenger vehicles. One of the more sophisticated was referred to locally as the 'Pullman' carriage, 6 feet wide and 24 feet long excluding its two end platforms, which was used for the official opening of the Coolum tramline by the Governor, Sir Matthew Nathan, in November 1923. Another was a 55-seat toastrack tramcar with reversible seating that came into use in March 1924.

John Browning
Annerley, Queensland

Export and/or restoration of locomotives – letter (LR 278)

I am writing to you in regard to David Rollin's letter in *Light Railways* No. 278 - April 2021.

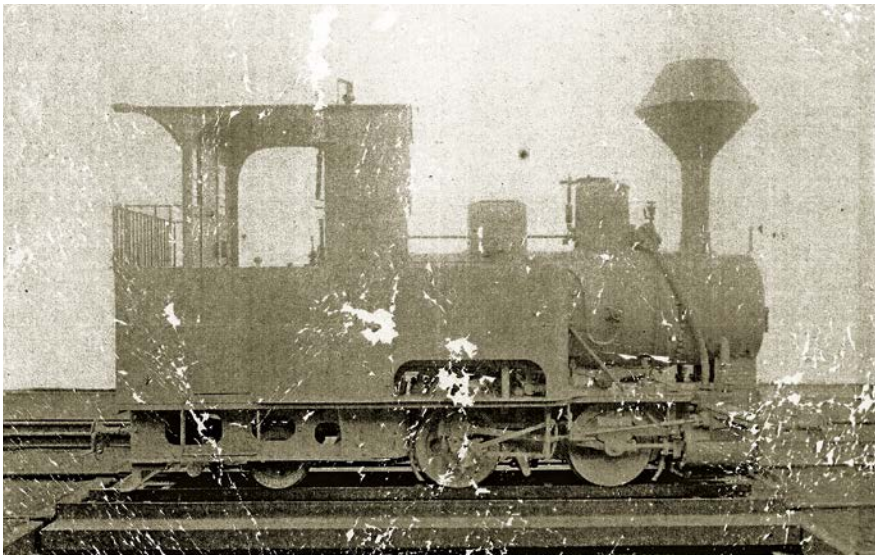
The export and/or restoration of locomotives is always going to be a very controversial subject and everyone is entitled to their opinion.

As President of ANGRMS, one of the organisations David chose to target in his email, I wish to clarify the issue David referred to.

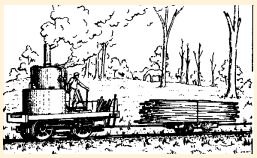
While David is technically correct in what he said, he omitted to add a few very critical words. In between restoring the locomotive and returning it, the group wanted to keep it for a significant number of years.

While it is only "a few words", those words are very important and change the context of the request.

Terry Olsson
President, ANGRMS



Builder's photo of Krauss 4722 of 1902.



LRRSA NEWS

MEETINGS

LRRSA members on line meetings
The LRRSA will be holding regular members meetings on line via Zoom conferencing on the dates below. Members wishing to "virtually" attend will need to pre-register by responding to an email inviting you to attend or via our website lrrsa.org.au. After registration, details of how to join the meeting will be provided to those that have registered.

June 2021 members Zoom meeting
Date: Thursday 10 June at 8.00pm AEDT
Mike McCarthy will tell the story of the 2 ft gauge Red Cliffs light railway that served the Red Cliffs pumping station in northern Victoria from 1924 to 1954. The line was 5.3 km long and carried briquettes and coal to the pumping station. A small Kerr Stuart steam locomotive and several Malcolm Moore tractors were used on the line..

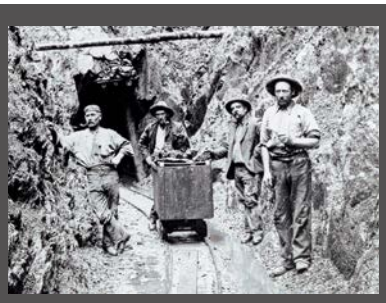
August 2021 Members Zoom meeting
Date: Thursday 12 August at 8.00pm AEDT
This meeting will constitute the AGM for the LRRSA. Following the formalities (expected to only take approx. 30 minutes) Geoff Maynard will give a presentation on some of the early hikes along the tramways of the Upper Yarra area using the Scouts 1936 Jamboree map.

BRISBANE: "Meeting topic to be advised"
We have been advised that we can now resume using our meeting room at the BCC Library at Coopers Plains as of June 2021. Our first meeting night will be Friday 18 June 2021 at 7.30 pm. At this stage the entertainment has not been resolved, but details will be provided to members locally, and on the Facebook page *Light Railways in Australia*.

SYDNEY: Annual General Meeting
Following the AGM, Ross Mainwaring will present a photographic selection of subjects of narrow-gauge industrial railway interest in both Canada and the USA. The subjects are both diverse and interesting.
Location: Woodstock Community Centre, Church Street, Burwood. Free Council car park behind building (entry via Fitzroy Street) or close-by street parking. Only 10 minutes easy walk from Burwood railway station.
Date: Wednesday 23 June 2021 at 7:30pm
NOTE: Due to the current Covid virus restrictions the large meeting room at Woodstock (Penfold Room) will be used for safe spacing requirements. Please contact the Secretary (0415995304) in advance if wishing to attend.

MELBOURNE: "No meeting"
There will be no meetings in Melbourne until further notice.

ADELAIDE: "The Coromandel Road bridge – and the Eden Hills tunnel"
There will be an Adelaide meeting on Thursday 3 June 2021 where, amongst other things, the above topics will be discussed. South Australian members will be advised by e-mail about a fortnight before, but the meeting will be on this date depending on any Covid rules at the time..
Location: 1 Kindergarten Drive, Hawthorndene
Date: Thursday 3 June 2021 at 7.30 pm



Field Reports

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

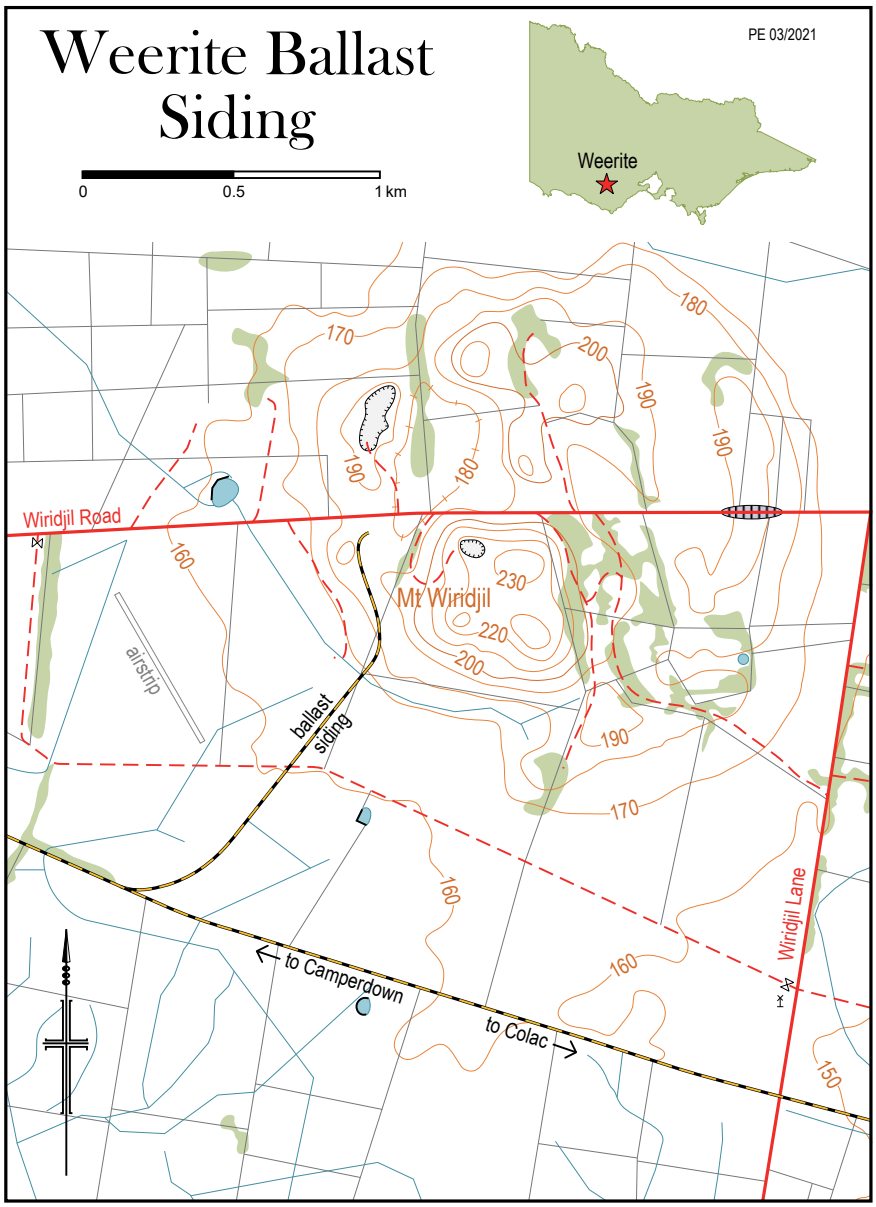
Weerite Ballast Siding, Weerite, Victoria
Gauge 1600mm

The contractor building the line from Colac to Camperdown in 1882 – 1883, McDermott, McNeill & Bath, sourced ballast for the new track from a quarry at Mount Wiridjil, situated on Manifold's sheep run, some five kilometres east of Camperdown. The contractor started work on the extension from Colac in January 1882 using gangs of navvies and horse-worked gear to form the earthworks and lay sleepers. The contractor's loco (*Camperdown*, a 2-4-0WT Stephenson ex Melbourne & Hobson Bay Railway Co) and ballast trucks arrived in Colac on 24 June 1882, thus allowing rail laying to commence. At first the contractor used ballast sourced along the route at the Colac end but it was not up to standard, so an alternative was sought. By the time the rails reached Camperdown late in 1882 better ballast had been found on Mount Wiridjil, so a quarry was opened on the west side of the mount.

The ballast spur line was built from the main line at or about the 196.7 km mark, with the points facing Camperdown. From the junction the track ran north for 1.5 km to the mount. From here the rails were then laid on a slight up-grade in a semicircle for 170 metres to curl around the slope to a dead end. The ballast stone was loaded here but there is very little archaeology to show how this was done, presumably via some sort of wooden staging coming off the slope and running high above the rail trucks, which were at a lower elevation.

There is no quarry face here but there are some pits and holes (that have been back filled with rocks and stones) so some of the ballast would have come from these. There are two quarry holes to the north and east, some 300 to 400 metres distant so possibly stone came from these sources and was conveyed to the end of the line but by what method is unknown to the writer.

There is a semi circular cattle pad coming out of the terminus area that curves around the slope towards the other two quarries that could suggest a tramway route, but the pads are so narrow away from the start as to preclude a tramway roadbed. If there was a tramway then evidence of it has long since vanished. And there is no sign of a cartway or formed road or track coming into the terminus area.



View along the line of back-filled pits and holes in the slope immediately above the ballast railway, which is the level section down to the right. Photo: Norman Houghton

Above left: *Road bed of the ballast line near the terminus (digitally enhanced). It is over four metres wide and well formed. Photo: Norman Houghton*
Above right: *View taken from near the end of the line looking towards the Warrnambool main line in the distance. The passenger train is passing the junction for the ballast line. There is not much to see between the V/Line track and the stone fence but, as the ballast line rises higher, it can be detected quite easily. It is visible as it comes up the slope on this side of the grazing bull. Photo: Norman Houghton*

Safeworking expert Gavan Duffy says in his notes that this siding was a staff station, so its authority would have been the Camperdown to Pomborneit Train Staff. The points were secured in all likelihood with a hand lock bar, the key being carried by the guard or brought along from Camperdown by a porter.

The ballast line was in use during the period from about December 1882 to May 1883 by the contractor. Afterwards, the VR kept the siding open for a few years for its ballasting purposes, probably for the line extensions through to Warrnambool and Port Fairy. The siding was closed on 31 October 1890. Gavan Duffy mentions that, even in his day in the 1920s, the site of the junction points and lead out were invisible.

A site inspection in March 2021 showed that about half the length of the line had vanished or was scarcely evident but the terminus end is intact, or mostly so. The track bed on the rising slope at the mount was formed by using borrow pits on the east side. The grade is not too steep. Norman Houghton March 2021

Wentworth Falls, Katoomba, NSW
Gauge unknown

Pictured are two pieces of rail used in walking track construction at Wentworth Falls, NSW. The long piece is on the over-cliff track near the falls, and would have been part of a now replaced track bridge. The stub of rail was once a fence post on the Empress Falls walking track. The rails were about 15-20 lb/yd and presumably came from one of the former mining ventures in the area. Both images (below) by Stuart Thyer. Stuart Thyer, 01/2021

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

ATHERTON HERBERTON HISTORIC RAILWAY, Herberton

1067 mm gauge

Work is currently proceeding on the commissioning of the 1905 Peckett steam locomotive and the 1910 carriage in preparation for them starting to run in 2021. These two have been immaculately prepared and will make an excellent sight running on the railway's track when all the commissioning is done later this year.

Atherton Herberton Historic Railway Facebook page, 11 April 2021

FRIENDS OF ARCHER PARK STATION AND STEAM TRAM MUSEUM, Rockhampton

1067 mm gauge

The Friends recently received notice that QR was making some major changes in its procedures for track work and requiring it to follow the QR systems. Upon receipt of this, the Friends notified QR that due to the major change, the current agreement would cease and that both parties would have to negotiate a new agreement. The Friends have had excellent negotiations with QR, with the two QR staff working on the agreement making the effort to check the legislation as well as what both parties do and how they operate, prior to the meeting. QR now understands that it does not own the track or land that the Friends operate on, and the track is not linked to the QR track. This also has implications, but of course Archer Park tracks run parallel to the QR track, so safety procedures are extremely important. This ruling has implications to all organisations that operate on land previously owned by state run railways.

Workers are still waiting for the Billard wheels to be repaired but the steam tram operations are going well.

Tram Tracks: Volume 15 Number 2 April 2021

DURUNDUR RAILWAY, Woodford

610 mm gauge

ANGRMS has just been advised that it has been successful in obtaining a Queensland Government Gambling Fund Grant for a much needed extension to its workshop. This will allow improvements to the onsite capability of undertaking the various tasks involved in restoring, operating, and maintaining a heritage fleet. It will also help maintain the special skills and expertise required.

Terry Olsson, ANGRMS

NEW SOUTH WALES

PETE'S HOBBY RAILWAY, Junee

610 mm gauge

Track from the turntable to 1 Road within the storage shed has been laid, connected to the main line and tested with the Ruston diesel locomotive. With both internal tracks now connected to the turntable, the shed can be fully utilised for its intended purpose. Workers have also temporarily laid 4 Road track off the turntable using timber for rails, thus allowing the passenger rolling stock to be shunted off the main line, facilitating main line operations. 3 Road has been partially laid and is also in use. Construction of the rail track from the turntable into the Shed's 1 Road was not simple as the access required a precise curvature of 18m radius. This would have been comparatively easy on Pete's earlier railway at Loftus, as this used 30-lb rail instead of the current 60-lb rail. For curving the 30-lb rail he used a manually operated jim-crow. However, bending of the 60-lb rail by this method is not practical. Previously, when building the PHR main line, bending of the 60-lb rail had been achieved by dragging one end of track using a heavy bulldozer, with the other end connected to previously laid track. This method was not totally satisfactory, resulting in uneven curvature down to around 17m which will at some time in the future need to be relaid to the desired minimum main line radius of 20 metres.

View inside the South Coast Railway Museum at Lake Tabourie in southern NSW. Photo: Alf Atkin

On Friday afternoon 12 March on the Puffing Billy Railway, locomotive 7A departed Belgrave and travelled light engine to Gembrook in order to position the Peckett locomotive for the following day's Thomas the Tank Engine *event. At Emerald the Peckett, dressed up in its refurbished 'Thomas' drag, was attached. The pair is seen travelling between Emerald and Gembrook. Photo: Lindsay Rickard*

Recycled plastic sleepers are being used throughout the depot area as these are being encased in road-base to provide a level walking surface, but would still be subject to water penetration.
Progress Report 65 dated 7 April 2021

Pete's next project is to prepare the Hunslet steam locomotive for a belated boiler inspection. Before this, the opportunity has been taken to drag the locomotive out of 2 Road and push/pull it in both directions through the 18m radius curve on the newly laid access track to 1 Road. The Hunslet easily traversed the curve, which had been laid 10mm over-gauge to compensate for its sharpness.
Progress Report 66 dated 12 April 2021

ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY, Albion Park

610 mm gauge

ILRMS operations on Saturday 10 April and Sunday 11 April saw *Burra* in steam preparation works and *Seymour* out of the shed for shunting duties. *Condong* was in charge of the Sunday morning main line until *Burra* was ready for the midmorning to afternoon run.
Brad Johns 11 April, Light Railways of Australia Facebook page

PEDAL POWER, Crookwell

1485 mm gauge

A group of rail enthusiasts believe they have come up with a pedal-powered way of retaining some of the country's disused historic railway tracks. With tracks being removed to make way for cycle paths, a group of volunteers in the small town of Crookwell, in the New South Wales Southern Tablelands, meet most weeks to try out their range of bikes which ride on the rails. They are adamant the concept of rail-bikes could be a viable option to use abandoned railway lines. A volunteer group of heritage rail enthusiasts wants to repair eight kilometres of the old track to run a tourism venture.
Goulburn Crookwell Heritage Rail secretary Peter Simpson discovered the pedal-powered bikes on a trip to the United States of America.
There are two and four-seater pedal bikes that can be ridden individually or coupled up to transport larger groups together.
As well as the rail-bikes, the group has also restored several other forms of vehicles capable of riding on the rail line. Along with handcars, they also operate a variety of motorised carts including wagons and a small bus.
Crookwell's Railway Station dates back to 1902 and a team of passionate volunteers have restored it to look similar to how it did more than a century ago. It was part of a push to ensure heritage railway stations and lines were not lost.
ABC Central West by Tim Fookes and Hugh Hogan Posted Sunday 21 March 2021, updated Sunday 21 March 2021

SOUTH COAST RAILWAY MUSEUM, Lake Tabourie

This small well presented museum showcases some light railways that operated in the area. These included the Bawley Point to Termeil Tramway, the Bannister Head Light Railway and the Chinaman's Island to Bendalong Tramway. There are a number of informative posters about these tramways as well as models depicting their operations.
All of the volunteers on duty are very enthusiastic and knowledgeable about these tramways. Also included on the site are four model railways with one of these being a Thomas self drive for the younger generation.
The cost of entry was a very generous $5.
Alf Atkin, Yass

VICTORIA

BORDER STEAM AND OIL ENGINE CLUB, Leneva

457 mm gauge

(Also known as the Wombat Gully Tramway)
At Leneva, south of Wodonga, there is a steam rally centre that includes among its attractions two steam locomotives that run on a circular track on what appears to be a gauge of two feet or less. It's only open on Easter Saturday and Sunday each year but they have a steam rally showing all sorts of vintage machinery, so it is much more than just the two steam locomotives.
Light Railways of Australia Facebook page, 4 April

PUFFING BILLY RAILWAY, Belgrave

762 mm gauge

The first trial of the "sitting on sills" project (which hopefully will lead to a time when people are once again permitted to sit on the windowsills and dangle their legs out) was held in late March and proved to be successful. The trial was held with adults and a future trial will be held with children. If this proves successful and ONRSR (the Office of the National Rail Safety Regulator) gives its approval, passengers will once again be able to travel in the now banned manner.
Andrew Webster 19 April 2021

The Malcolm Moore locomotive at the head of the Steamfest train at Sheffield in March 2021. Photo: James Shugg

At the time of writing trains are scheduled to run on Fridays, Saturdays and Sundays, with no trains beyond Lakeside on Fridays. Beyer Garratt locomotive G42 is now in storage waiting workshop space for an overhaul, whilst Beyer Garratt NGG16 129 is having a new ashpan fitted. Steam locomotives in service are 7A, 8A, 12A, and 14A.

PBR Monthly News April 2021; Puffing Billy Volunteers Facebook Group, Frank Stamford

TASMANIA

REDWATER CREEK RAILWAY, Sheffield

610 mm gauge

The Redwater Creek Steam and Heritage Society received sign-off from the authorities to run a covid-safe Steamfest 2021 just 3 weeks before the event was held over the March long weekend. In addition to dozens of steam traction engines, there was a tractor pull, historic machinery display, a celebration of 75 years of Ferguson tractors, bullock team and light horse displays. More than 6000 people visited over the three days, and nearly a third of these rode on the four carriage, socially distanced passenger train, which ran 12-14 return trips daily with up to 60 people aboard, around the perimeter of the event. To save time by eliminating the need for the steam loco to run around the train, a loco was attached at each end of the consist. The ex-Babinda sugar Malcolm Moore No. 19 (b/n 1011 of 1943) hauled the down service out of Sheffield station, with the Krauss towed at the rear of the train. At the end of the line, the MM would detach, and the Krauss would haul the up train back to Sheffield, chased by the diesel running light engine in reverse. This procedure reduced the load on the Krauss by three tonnes meaning fewer fuel and water stops. Passengers would alight at the newly completed Dulverton station and passing loop to avoid congestion at Sheffield station, and allow for a covid wipe-down before the next run.

In the workshops area, the beautifully restored Ruston diesel locomotive was on display. It is planned to send this loco to Launceston to have a starter motor and front coupler fitted, after which it will share back-up and trackwork duties with No. 19. A long term restoration prospect is ex Babinda No. 20 Malcolm Moore (b/n 1057 of 1943). This loco is completely intact but is believed to have spent some years in a saltwater creek in Queensland.

James Shugg

WEE GEORGIE WOOD RAILWAY, Tullah

610 mm gauge

Wee Georgie Wood operated a full season in 2020-21, with two running weekends per month since October, and the Anzac Day weekend expected to close the season. One weekend in late February saw 79 passengers ride on 11 return trips over the two days, and in early March 70 rode the train in one day alone. These busy days contrasted with one in December when no visitors showed up at all. Less than half a dozen regular volunteers keep this remote railway operating, often in miserable weather conditions. Apart from a sporadically troublesome injector and some on-the-run adjustment needed to the connecting rods, *Wee Georgie* has performed faultlessly this season,

Ruston locomotive in the yard at Sheffield in March 2021. Photo: James Shugg

and these maintenance issues will be addressed during the winter shutdown before services resume in early October.

Meanwhile, work on a new passenger carriage, commenced a decade ago on the chassis of a late nineteenth century bogie flat car, has almost been completed, with windows and seating fitted this season. Test runs have shown this vehicle to ride very smoothly, and its locally designed and fitted screw handbrake which operates on both bogies connected by chain has proven very effective.

Tucked away at the back of the Tullah workshops is a gang motor believed to be ex Emu Bay Railway, gauge converted to 610mm. It is fitted with a Ford Escort 1.6 litre petrol engine and gearbox, chain-driven to one axle. Old photos on site suggest it was used when the current line was constructed in the 1980s, but no one involved with the railway today recalls ever seeing it run. It is believed it is intact and close to operable, but traction issues on the steeply graded line probably saw it fall into disuse.

Built by Nicola Romeo in Italy in 1925, 4wPM *Romeo*, operated on the Lake Margaret tramway for 40 years, then spent the next 40 years in a museum in Zeehan. It was fitted with a 1950s Dodge straight six about 10 years ago and now is the back-up loco for *Wee Georgie Wood* at Tullah.

James Shugg Light Railways of Australia Facebook page April 11

The almost complete passenger carriage still getting work done in the shed at Tullah in March 2021. Photo: James Shugg

IDA BAY RAILWAY, Lune River

610 mm gauge

Despite signing a licence agreement with the state government last year, the Ida Bay Railway Preservation Society, as at early April, still did not have formal access to the railway. A second license agreement has been prepared by the Parks and Wildlife Service, custodians of the railway, addressing shortcomings and ambiguities in the first license. In anticipation of this being signed, the IBRPS has had power reconnected to the Ida Bay workshops, begun the safety accreditation and public liability insurance processes and milled and treated several hundred hardwood sleepers.

As Wee Georgie Wood *(John Fowler builder's number 16203 of 1924) readies itself by taking water before another run at Tullah on February 28, Nicola Romeo (builder's number 770 of 1925) stands ready with the water tanker train in case of lineside fires. Photo: James Shugg*

In early March, members of the Society met with representatives of the Office of the National Rail Safety Regulator at Ida Bay. This provided an opportunity to get into the workshops, and to photograph some of the mothballed rolling stock, including No. 5 (Malcolm Moore b/n 1056 of 1943) and No. 7, the locally built Chevrolet powered railmotor (Fred Peacock 1943).

The optimism on the signing of a licence to allow site access and restoration has been dampened somewhat as Parks Tasmania has issued a second, replacement licence, with detailed and changed requirements. Access has been withheld while this was done and it has contributed to making the road to restoration a long hard one.

Another contributor has been the imposition of a requirement to obtain Public Liability Insurance, initially for $20 million. Those following the debate about insurance and tourist railways will understand the additional difficulties this provides. The Society had obtained Volunteer Insurance to cover the renovation stage when public liability should not be an issue.

The Society has undertaken to go ahead with the second licence and to seek Public Liability Insurance, but their request for access in good faith remains unanswered.

On the positive side, with temporary access granted for the day, Steering Committee members met with representatives of the Office of the National Rail Safety Regulator on site. This proved to be an excellent meeting with ONRSR subsequently offering to work with the Society on a staged Accreditation Plan.

As well, ever the optimists, the Society has begun stockpiling sleepers that one day will be able to be used in renovation efforts.

James Shugg and Abandoned Railways of Australia Facebook page 11 April

TASMANIAN RAILWAYS 150TH ANNIVERSARY

This year marks the 150th anniversary of the opening of Tasmania's first railway, which ran between Launceston and Deloraine. To mark the anniversary, the Tasmanian Government Railways officially handed over the last English Electric Corporation locomotive built in Australia, and five kilometres of currently unused track to the Tasmanian Transport Museum to expand its heritage rail operations.

Abandoned Railways of Australia Facebook page 11 February 2021

SOUTH AUSTRALIA

GHAN PRESERVATION SOCIETY, Alice Springs

1067 mm gauge

NSU 58 has recently been fired up for the first time in 14 years. The Society now has two running engines, the other being ex QR shunter DH14.

Abandoned Railways of Australia Facebook, 19 February 2021

WESTERN AUSTRALIA

BENNETT BROOK RAILWAY, Whiteman Park

610 mm gauge

At the February Management Committee Meeting it was decided to cancel the May *Ashley* Day in 2021. With the uncertainties around COVID 19,

Left: *The second Malcolm Moore awaits the efforts of the restoration crew in the shed at Sheffield in March 2021. Photo: James Shugg*

Below left: *The out of use ganger vehicle awaits some much-needed repairs in the shed at Tullah in March 2021. Photo: James Shugg*

Below: *The red Malcolm Moore locomotive in the shed at Lune River in March 2021. Photo: James Shugg*

In March 2021 the Office of the National Rail Safety Regulator visited Lune River and the Donnelly rail car was stored in the shed quietly waiting for the attention it needs. Photo: James Shugg

the committee considered it unwise to commit considerable funds to putting on *Ashley* Day only to have to cancel it at the last minute. Also, with the current social distancing requirements, the restriction on the number of attendees would make the event profit marginal.
The committee is hopeful that by September there will be more stability with regard to COVID and the railway can again run the popular Friends of *Ashley* Day.
On 24 February the Office of National Rail Safety Regulator (ONRSR) visited the railway to carry out a desktop audit of the Track & Structures Department. No major deficiencies were highlighted, and the Safety Management Team awaits its findings. This is the third audit carried out over the past three years, previously auditing rolling stock – carriages and wagons – and the light up procedures for steam locomotives.
On the South African NG 15, 123, work has been progressing on the valves and brass work preparing for when the boiler eventually returns. Cleaning and painting the chassis while it is accessible on the pit has also been completed.
On the Fowler, *Rosalie*, number 2, the drive shaft/universal joint is out for repair/modification to suit the new gear box and engine. All the bonnet panels on the locomotive are being bolted down. The front grill is temporary on the loco with an extra headlight being fitted in the original Fowler position. Workers are still waiting on the wheels and they are progressing, albeit slowly.
The Dorman Planet, number 8, had a failure a couple of months back and requires the wheels and axles repaired. This has to wait until after the Fowler's wheels get back and the Fowler can be moved to clear space for it. The cab interior is getting painted while it waits in the queue.
The Bennett Brooklet – March/April 2021

CARNARVON PIER RAILWAY, Carnarvon
1067 mm gauge
Carnarvon's historic One Mile Jetty has been ripped apart by tropical cyclone Seroja. The jetty was destroyed with strong winds and high tides tearing the pier apart at the middle.
The jetty was constructed in 1897 for wool and livestock export to Fremantle. By 1904 the head of the jetty was added and in 1912 the jetty widened to accommodate the increased traffic in the area. Carnarvon was the first port in the world which loaded livestock onboard ships for transport to market and holds the record for longest jetty in the north of WA. The One Mile Jetty was also notorious for its animal races, where competitors would race sheep along the entire length of the jetty.
After road train transport commenced the jetty fell into disrepair, until 1998 when the Carnarvon community banded together to save the longest jetty in the north. The jetty was heritage listed soon after and has been preserved ever since.
Brianna Dugan, *PerthNow,* 11 April 2021

A site visit in 2016 found the jetty in a bad state of repair with several very rickety sections. Talking to a staffer at the small and excellent museum at the beginning of the jetty, revealed that although funding for repairs had been sought by the community, none was forthcoming, and the future of the jetty looked grim. The cyclone has basically sealed its fate with little chance of it being repaired.
The railway continues across a flat area from the jetty to the town station which is just a very short distance from the centre of the town. The station is quite a modern affair but did not appear to have had any recent traffic. In fact, the line between this station and the jetty some three kilometres distant, has been severed in at least two places and could not operate any through traffic.
At the museum, the main attraction is the steam locomotive *Kimberley*, which used to work the railway but has not worked for some time. It had been replaced by a travesty that was someone's idea of a locomotive, including a strange face but this too was not operating as the jetty was deemed to be unsafe.
Andrew Webster, site visit 2016.

At the zenith of its railway operations, around 1964-65, the State Electricity Commission of Victoria operated about 107 track kilometres of 90cm-gauge railway with 42 electric and three diesel-mechanical locomotives at Yallourn and Morwell. On 4 March 1974, Weston Langford joined the "Vintage Train" at Flinders Street for a special train organised by the SPCC (Steam Preservation Co-ordinating Committee). Using an L-class electric locomotive, they travelled to Moe and then visited Yallourn. Judging by the range of photos, a visit to train control, one of the loco sheds and the open cut were all on the schedule. Shown here are: (above) a view of the open cut from the Train Control office with No.105 hauling a loaded rake of trucks and No.103 propelling a rake of empties; (left) loco No.106 hauling a mechanical trackshifter near the Train Control office; (below left) at the loco shed, No.109, nearest camera and No.112, at left, both of the post-war 60-ton class. Behind and at right is one of the larger 62-ton locos, introduced in 1962 (Nos.121 – 123); (below right) loco No.40 at the No.2 locomotive shed.
Photos courtesy: https://www.westonlangford.com