APRIL 2018 \$7.95 Recommended retail price only

LIGHT RALWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



Light Railway Research Society of Australia Inc.



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Distributor: Gordon and Gotch Limited. ISSN 0 727 8101, PP 100002829 Printed by Focus Print Group.

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Imperial to metric conversions:

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



Australia's Magazine of Industrial & Narrow Gauge Railways

No 260 April 2018

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Editorial

One of the biggest challenges in researching light railways is that there is often very little information readily available - one has to look very hard to find it. Often this will start with an obscure reference to a tramway and one has to search all manner of references to find more. This is in contrast to main line railways that have a huge repository of information available to undertake research. The lead article in this edition on the tramways used in the construction of the Torrumbarry Weir is an outstanding example of research undertaken from the ground up. Mike McCarthy has done some excellent research starting from very little available information to a detailed article covering all aspects of the tramway. I recently joined Mike and some others on a field trip to inspect some firewood sidings at Torrumbarry. I vividly recall getting out of the car at the location and wandering around looking for remnants. I said to fellow field inspectors Peter Evans and Bruce Maclean that I could not see anything that seemed relevant. They took me aside and pointed out all the subtle clues – slightly raised earth mounds, possible sleeper marks, the regularity of the parallel tracks and so on – it all then became clear!!

I trust that you will enjoy the article and suggest that if you have the opportunity to look at a site with an experienced researcher, take it up. *Richard Warwick*

Front Cover: Krauss 0-4-0, B/N 2437 of 1891, Robin, returning from unloading fine sand, quarried from the bank of the Murray River, at the Torrumbarry Weir and Lock construction site c1922. Photo: State Library of Victoria, hand tinted by Mike McCarthy



Light Railway Research Society of Australia Inc. A14384U PO Box 21 Surrey Hills Vic 3127 www.Irrsa.org.au The Light Railway Research Society of Australia Inc. was formed in 1961 and caters for those interested in all facets of industrial, private, tourist and narrow gauge railways in this country and its offshore territories, past and present.

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

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double spaced if typed or written. Electronic formats accepted in the common standards.

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The bridge over Cameron Creek, a short distance south of the lock site, was constructed to carry the tramway, but was to be later used for road access. Photo: State Library of Victoria SR&WSC Collection

Torrumbarry

by Mike McCarthy

From the earliest days of settlement, the River Murray was an important asset to south-east Australia. It provided irrigation for farmers, water for settlers and transport for products, materials and people from towns scattered along its course. It was of vital importance to three states; New South Wales, South Australia and Victoria.

By 1914, however, the growth in settlement and a need to use the river for transport during the summer months saw pressure grow to harness the river and change its natural flow to better meet the needs of the three states. Long dry summers would see the water level drop, closing the river to navigation and, either preventing irrigation entirely, or making necessary expensive pumping to lift water into channels. In contrast, high rainfall and snow in the upper section of the Murray system would often see flooding in winter.

The importance of the river to the economy of the region drew attention to finding a remedy to the seasonal fluctuations. If the flow could be regulated to achieve consistency across the year, more land could be irrigated and at lower cost through the removal of summer pumping. Furthermore, river boats could operate along the stream for the full twelve months of a year.

In an impressive example of Commonwealth and State co-operation, the Commonwealth of Australia and the three affected states combined to reach an agreement in 1914 which would see the river harnessed and controlled.

The plan devised was massive. It involved constructing the huge Hume Reservoir upstream from Albury, the development of LakeVictoria, near theVictorian, New South Wales and South Australian borders, as a major storage, and the construction of 35 locks and weirs along the Murray and the Murrumbidgee Rivers. The latter flows through southern New South Wales and eventually empties into the Murray. The first lock and weir to be constructed in the New South Wales/Victoria section was to be at Torrumbarry, 34 kilometres downstream from the major Victorian river port town of Echuca.

Torrumbarry was chosen because it offered an immense return on its investment. This was principally because of the opportunity to provide greater certainty of water supply to the Kerang and Swan Hill Irrigation Districts at a lower cost than in the past. The district, including the Kow Swamp water storage, was supplied with water by means of Gunbower Creek (an anabranch of the Murray) and the National Channel, which diverted from the Murray River a short distance upstream from the proposed site of the Torrumbarry Weir. During the irrigation months from September to May the entrance to the channel would sit above the level of the river for much of the period. To enable irrigation to take place during this time, the Koondrook, Gannawarra and Cohuna pumping stations were built to lift water into feed channels. By raising the water level of the Murray River in summer the Torrumbarry Weir would remove the need for these.

A weir and lock at Torrumbarry would also guarantee navigable water to the inland port and railhead of Echuca year-round, thus permitting the transport of wool and other primary products from northern Victoria and western New South Wales to the Port of Melbourne.

In short, the construction of the Torrumbarry Weir and lock offered the greatest return on investment of any of the weirs and locks proposed.

With the agreement of states and Commonwealth in place and with the Victorian State Rivers and Water Supply Commission (SR&WSC) committed to undertake the required works, planning for construction commenced in 1914.¹

The design called for the river to be diverted into a channel to be excavated through the neck of a bend. The diversion channel would be crossed by a weir and a lock. On completion of the channel works the original course of the river was to be dammed to force the river flow through the channel.



The design was innovative in that it obviated the need to construct coffer dams around the worksites which was an obvious necessity where construction was to take place in a flowing stream. With this plan, the weir and lock could be built on dry land and then later flooded.

The key components of the work included site clearing, excavation, concreting of the channel floor, construction of the lock and, finally, the damming of the original river course. All aspects of the work involved the movement of a massive volume of material which could conceivably have involved the use of tramways. However, not all did.

The weir and the lock required copious quantities of cement, steel and timber as well as the equipment needed to produce concrete and fabricate other components. All of this had to be transported to the worksite, and first thoughts considered making use of the river. Materials, goods and equipment could be railed to Echuca, Victoria's premier inland port, and then carried by barge to the worksite. Also, the absence of nearby rock suitable for crushing into aggregate to produce concrete meant that massive quantities had to be carted from elsewhere. Investigations by the astute SR&WSC engineers found the mullock from the mines in the Maryborough area to be perfectly suitable and easily accessible at a low cost. Consequently, they proposed bringing the material from Carisbrook, near Maryborough, to the work site. Barges could be employed here as well.

Progress with planning and design was rapid at first, however, the Great War brought activity to a halt as resources, including men, were diverted elsewhere. It was not until 1919 that attention returned to the project but with a profound sense of urgency attached to it. Another factor had come into play. This was a time of significant unemployment as soldiers who had returned from war sought to enter the workforce. Jobs had to be found for them and schemes such as this offered a solution that also brought a wonderful economic benefit. The Commonwealth and State Governments did not want to waste time in getting matters moving especially as most of the planning for the scheme had been sitting on shelves awaiting the end of the war.

Tenders were called for the river transport² of materials, and alterations to the wharf at Echuca commenced.³ But sensible minds soon drew attention to one of the prime objectives of the works to convince others to take a different view.⁴ The unreliability of the river as a means of transport over the summer months was a major driver. Implicitly, this shortcoming also cast doubt on its suitability to dependably supply the Torrumbarry work site. The engineers turned to the only practical alternative and decided to transport all that was required by rail. The Elmore to Cohuna railway passed within eleven kilometres of the worksite and early in July 1919 the decision was taken to construct a tramway from the railway to the location of the proposed weir.

Within days, and with what seemed a great deal of urgency, action was underway to connect the weir site with the Cohuna

railway. Tenders were called for rail, points and crossings and 70, one-cubic yard side-tipping trucks; rails ranging in size from 14 lb per yard to 24 lb per yard were acceptable.⁵

The route was also determined. The closest practical point for a railway siding was between Patho and Gunbower stations. With this as the starting point the proposed route then maximised the use of public land to keep compulsory access to stretches of privately owned land at a minimum. Grades were not a consideration as the path was practically level. A straight route running north-east from the proposed railway siding would have been quite possible but for the need to keep lease payments to property owners as low as possible. Because of this, the alignment was to follow a "saw-toothed" path across the countryside, taking advantage of roads and road easements where feasible. The adopted gauge of two feet and the sharp curves that this would allow made this possible. Physical barriers did need to be considered, however. With Gunbower Creek and the National Channel (a short-cut diversion of Gunbower Creek) to be crossed, and with existing structures to be used where possible, the Four Mile Bridge over the National Channel and the bridge at Splatt's Weir on Gunbower Creek served as crossing points and added another "tooth to the saw". The dry river bed north of the Four Mile bridge was the other intervening physical obstruction and meant that the tramway needed to take a sweeping curve to the north to avoid it.

Swamp and flood prone land near to the works site did not drive a diversion but did require the raising of the formation. The judicious planners dealt with this with thought and efficiency. The formation in this area was made broad with spoil from the works and the substantial bridge built in the section leading to the weir area was designed to cater for road vehicles as well. It would form the long-term principal access to the site, a fact that remains true to this day.

At 1.2 kilometres from the weir the need for a raised formation ceased as the tramway passed over the levee that was to be constructed around the works to protect them from flooding. From this point earthworks for the tramway were minimal.



State Rivers and Water Supply Siding near Patho late 1919. The goods shed construction has commenced and the tramway laying has commenced but doesn't appear to have extended beyond the gate in the distance. The delivery of the hopper trucks and other equipment has commenced. The flat featureless landscape aided rapid progress with tramway construction. Photo: State Library of Victoria SR&WSC Collection



With the site of the proposed siding locked in, the Victorian Railways was approached early in July 1919 regarding its installation.⁶ No time was wasted in undertaking the work and the siding, a simple loop on the north side capable of holding 20 trucks,⁷ was open for business on 10 November as "Patho State Rivers and Water Supply Commission's Siding".⁸ The following two months saw the erection of a six-ton derrick crane, for unloading general goods and machinery, and a Priestman grab crane to unload gravel despatched from Carisbrook. In all, a very rapid start to the project.

Rail deliveries commenced immediately, as did the laying of the tramway. A single line of two-feet gauge rails was positioned alongside the VR siding with a loop at the east end. A commodious goods shed and platform provided protection for bags of cement and other goods delivered by rail while the derrick crane commanded the west side of the shed. A planked wall, protecting the broad-gauge siding from gravel spillage, extended away from the goods shed between broad and narrow-gauge sidings. It was in this section, along the extended stretch of siding leading to the west, that the Priestman grab crane transferred the Carisbrook gravel either into the SR&WSC one cubic-yard trucks or onto the large dump of gravel that accumulated there.

Construction of the tramway progressed from December 1919 into 1920 and, with little in the way of engineering required, was completed before April,⁹ with horses providing the haulage power needed.¹⁰ Sixteen pound to the yard rails were used which were laid upon split and adzed sleepers. Ballast was scraped from the dirt alongside. Openings through fences along the way were initially secured by removable wire barriers that needed to be pulled clear when traffic passed through. These were later replaced with gates or rails.¹¹

Excavation commences

Work started on clearing the neck of the river bend prior to constructing the tramway back early in 1919 and was completed by June.¹² This was accomplished by the deployment of labourers to grub out the roots of trees leaving the final task of plucking trunks from the ground to traction engines, of which three were deployed. The excavation of the channel trench, which would involve the removal of 256,000 cubic metres of earth, spanned nine months from July 1919 to March 1920. Horse drawn "monkey-tail" scoops removed most of the spoil but some short sections of light two-feet gauge tramway carrying one cubic-yard trucks and worked principally by man-power, were also used. A huge spoil heap grew on the south-west side of the works area.

The good progress that marked the early months of the works was brought to a grinding halt in March 1920¹³ when the workers went on strike. The labour forces from New South Wales and Victoria shared the same workplace at the Mitta Mitta Junction works (later renamed Hume Reservoir). Those employed by the NSW government were paid more than their Victorian counterparts leading to the Victorians striking to achieve pay parity. The action spread to Torrumbarry where similar work was being undertaken. It was to be twelve months before the matter was settled. Work recommenced in March 1921.

Nothing happened at the Torrumbarry Weir site during the strike and the tramway lay practically unused for a year. However, behind the scenes progress was being made. The SR&WSC invited offers for the supply of a two-foot gauge locomotive in February 1920¹⁴ and in April the Melbourne Harbor Trust (MHT) responded offering a suitable unit for \pounds 475. It was Black, Hawthorn & Coy. B/N 1134 of 1897,¹⁵



Krauss B/N 2437 of 1891, an 0-4-0 painted red and appropriately named Robin, at work placing Carisbrook gravel on the pile at the weir site. Photo: Rural Water Commission



Black, Hawthorn, Julia, is engaged in removing empty tipplers from the aggregate unloading pits while pushing trucks loaded with, what appear to be, coarse sand that could not be placed in the hoppers. A bit of shunting would have seen these trucks pushed onto the storage stacks where the sand would be unloaded. In the background is the office worker's barracks. Photo: State Library of Victoria SR&WSC Collection

which was of 0-4-2 configuration weighing approximately seven tons.¹⁶ It was originally supplied to the Zeehan and Western Silver Mining Co., Zeehan Tasmania where it was known as *Western*.¹⁷ In 1916 it was sold to agent JE Toole who shipped the engine to Melbourne where it was stored at the outer end of Ann Street Pier awaiting a buyer. Ultimately ownership passed to the MHT, which sold the locomotive to the SR&WSC, presumably to recover storage fees.

The poor condition of its boiler at the time of sale meant that a reconstruction was needed and this work was undertaken at the Williamstown premises of Thompson & Co., Engineers.¹⁸ It would appear also that the side water tanks, possibly corroded from sitting so long on the pier, were removed at the time and replaced by a tender comprised of a square water tank mounted upon a standard tipper truck underframe. The tender could be positioned either at the cab or smokebox end of the locomotive.¹⁹ The arrangement would have been at the instigation of the SR&WSC because of an absence of suitable water along the tramway. It appears the locomotive was delivered to Torrumbarry during January 1921, despite negotiations with Thompson's regarding cost continuing through to April.²⁰ At Torrumbarry it was given the name *Julia* though the source of this is not known.²¹

With the striking workers back on the job, haulage on the tramway started in March, and over the following three months approximately 3000 cubic yards of gravel and other material were moved to the stockpile at the worksite.²² Having proved to be something of a mouthful, the name of the siding, "Patho State Rivers and Water Supply Commission's Siding" was changed to "Torrumbarry Weir Siding" in March 1921 when traffic through the siding recommenced.²³

At the time the workers returned, the SR&WSC initiated the purchase of a second locomotive. It was needed for the shorter runs around the work site but the timing would also suggest a desire to expedite work on the project given 12 months had been lost due to industrial action. The locomotive was in the hands of the Queensland Government Railways. It was an 0-4-0 of Krauss manufacture being that firm's number 2437 having been built in 1891 for Melbourne machinery agents, Bloomfield Brothers, and eventually sold to the Oceana Silver Mining Co. at Argenton in Tasmania in 1892. The following year it moved to the Western Silver Mining Co. at Zeehan where it was known as *Little Western* in deference to the larger Black, Hawthorn & Coy *Western* which was also in use at Zeehan. Ten years later it was passed to the Queensland Government Railways for use on the regrading works near Maryborough. On completion of work there it sat idle at the Ipswich Workshops²⁴ before its move to Torrumbarry to be reunited with its former stablemate in June 1921.²⁵ Its red livery gave rise to the name by which it was known at Torrumbarry; *Robin.*²⁶

Like its larger colleague, the Krauss was also equipped with a tender, which was employed for the run to the railway siding and back. When used around the worksite the tender was dispensed with.²⁷

Rolling-stock, naturally, was matched to the planned use. In November 1919, the Commission purchased 10 underframes from Kirckner and Shadwick²⁸ and constructed three bogie trucks for carrying rails and other lengthy items of material, as well as two four-wheel flat trucks with wooden ends and removable sides for carrying smaller goods and men.²⁹ The flat trucks were attached to the ends of all trains travelling to and from the siding as well as for most shorter journeys. They were used for general goods but also to carry an assistant to work gates and points encountered along the way. The bogie trucks were also used to carry firewood from the stacks in the forest to the firewood mill at the west end of the work site.³⁰ It would seem the other two underframes were used for the locomotive tenders.

The first batch of the ubiquitous one-cubic yard side tipping trucks was ordered during December 1919 and, combined with the earlier items, constituted the sum of rolling stock until June 1921.

In that month, along with the second locomotive, the SR&WSC ordered a further 32 side-tipping trucks in what appears to have been an effort to make up lost time. A normal train operating on the main line comprised 30 tippler trucks. A further 20 trucks, most likely for working the fine and coarse sand lines, as well as six concrete trucks were ordered over the following two months giving a total of 72 side-tipping trucks in the fleet.³¹

Throughout this period, the Commission was also dealing with the land owners along the route. Use of legislation that allowed the Commission access to the land it needed meant that the farmers along the way could not stop tramway construction, but the Commission was obliged to negotiate payment for the access. Most land holders, it would seem, were delighted to receive payment for rent of their land, but not so Bertha Reddie and the executors of Thomas Maher who fought hard for more money. Reddie, at least, was ultimately successful in being paid more because a section of her land was cut off by the tramway.³²

Following the end of the industrial dispute in March 1921, work recommenced at the weir and lock site. With 100 men and 25 horses deployed the trench through the neck of land was deepened prior to concreting the floor and forming the lock chamber.³³ Three-horse teams pulled scoops and dumped

the spoil on the south side of the worksite on what was to become an enormous mound.³⁴ Over the first half of 1921 additional structures were erected to provide workshop and accommodation for workers.

Concrete

Work also started on the concreting plant with sheds for storing cement and bins for sand and gravel being erected. Concrete was to be placed over the weir site by a combination of tramways and cableway. The latter was of particular interest as the cable was to be strung from a permanent pivot tower on the north side of the works to a radial tower on the south side. The radial tower sat on flanged wheels, which could be winched in an arc across the site. This allowed the placement of concrete where it was required at any point across the works.³⁵

The principal purpose of the tramway to Torrumbarry Siding was to bring cement, gravel and sand to the concrete plant which was erected on the west side of the works. Sidings provided for the delivery of sand and gravel to elongated heaps that stretched along the rear of the spoil heap. The rails ran across the top of the respective heaps. Although the rails must have been raised at times when gravel and sand accumulated, once concrete production commenced the stacks quickly depleted and track returned to ground level.





The Torrumbarry work site late in 1922. Much of the concrete work for the lock and weir is complete. The tramway serving the concrete plant has been cut back as the trench for the downstream exit of the lock is being excavated. Photo: State Library of Victoria SR&WSC Collection

The concrete plant was completed and set to work early in 1922. From this time work accelerated to the point where by June 1922 there were 200 men at work on the site.³⁶ Between July 1921 and June 1922, 25000 tons of materials, mostly rock spalls, gravel, sand and cement, were transported from Torrumbarry Siding to the works. At peak times, following the delivery of Victorian Railways trucks loaded with Carisbrook gravel, both locomotives were independently deployed to haul loads over the access tramway. To allow for this a passing loop, 76 metres in length and capable of holding a locomotive and 30 trucks, was placed 6.1 kilometres south of the works (4.5 kilometres from Torrumbarry Siding), alongside Gunbower Creek, near Splatt's Weir. Gravel and sand on arrival would be used to top up the hoppers at the concrete plant, with any material remaining being sent to storage heaps.

It may well have been at this time of heavy traffic that a change was made to the tramway arrangements at Torrumbarry Siding. The trackwork was, in effect, duplicated by the laying of a siding and loop on the north side of the shed and platform. It is easy to understand the desirability of doing this. The earlier layout was designed principally around the loading and despatch of the Carisbrook gravel. The loading of anything else, especially bulk items such as timber and cement could seriously hinder the despatch of stone and vice versa. The additional siding allowed two trains to be loaded at a time whether they were loading the same commodity or not.

Although at peak times both locomotives were deployed on the line to Torrumbarry Siding this was not the case at other times. The larger, Black Hawthorn & Coy, locomotive was used for most of the haulage work from the siding to the works while the Krauss was engaged mainly in moving sand and gravel from the heaps to the bins, firewood from the nearby forest and other materials around the work site. It also seems likely that it was engaged in hauling sand from the pits on the Murray River bank, three kilometres east of the weir and from the coarse sand pits, on Gamble's land alongside the main line, to Torrumbarry Weir Siding.

Carisbrook Gravel

Well before construction of the Torrumbarry Weir and Lock had commenced, the SR&WSC had identified the need to source stone for the manufacture of concrete at the weir. No source, local to the proposed works, could be found. Suitable material at a low cost did exist though in the mining mullock heaps at Carisbrook, just east of Maryborough on the Castlemaine to Maryborough railway. The material was comprised of a whitish coloured gravel with stone up to 75mm in size.

The mullock heap from Chalk's No 2 mine was purchased by the SR&WSC from farmer James Stewart³⁷ and it proved to be ideal in many ways not least of which was that it was found 370 metres from the railway with a slight down grade to the railway. Perfect for transporting copious quantities of stone!

In accordance with the original plan to send the gravel by rail to Echuca and then river barge to Torrumbarry, in April 1919, the SR&WSC arranged with the Victorian Railways for the construction of a siding on the railway to Castlemaine. It was designed to hold 20 trucks and would be served by an elevated

An overview of the mobile radial tower that was used to place concrete across the worksite. It was shifted, as required, by a winch positioned at the rear of the tower and ran along the three sets of curved tracks visible. To its front is the line of track that carried the concrete hoppers from the mixing plant at the bottom of the image. The network of tramways delivering aggregate and concrete is visible as are the three-horse teams drawing scoops engaged in excavating the down stream trench to serve the lock.

Photo: State Library of Victoria SR&WSC Collection





Taken during the second half of 1922, this view of the concrete production area shows a line of trucks loaded with Carisbrook gravel on the left, while closer to the hoppers, a short rake of tipplers, loaded with coarse sand, awaits unloading. The short siding leading to the store on the left holds trucks, probably in need of repair, and also what appears to be Robin's water tender. The Krauss did not make use of the tender when working sidings about the site or for the short runs to the firewood area or the fine sand quarry. Photo: State Library of Victoria SR&WSC Collection



A poor quality image of a very interesting scene. Julia is at Torrumbarry Weir Siding, probably late in 1922, about to head off to the weir with a load of Carisbrook gravel. The workers at the siding have been gathered for a photo prior to departure. The additional siding and loop have been installed to allow for two train operation in the rush to complete the weir and lock. Photo: Cohuna and District Historical Society

loading ramp "similar to those in use on the Frankston line". The platform was 26 feet in length and was accessed via a ramped approach, 70 feet in length.³⁸ The siding opened for traffic in July 1919 and it is likely that the construction of the tramway linking it to the mullock heap followed soon after. The decision to use rail and not river to bring gravel, equipment and materials to the Torrumbarry work site meant that operations at the Carisbrook end could not start until the siding north of Patho was completed and sufficient infrastructure work, including the delivery and commissioning of the Priestman grab, was completed. The siding was completed early in November 1919, but it was well into 1920 before gravel could be accepted there.³⁹ In all likelihood operations at Carisbrook started around April 1920 after the tramway to the weir was completed. The rail distance from Carisbrook to the siding north of Patho was 190 kilometres.

The tramway connecting the mullock heap and siding was



of two feet gauge and was worked by gravity to the siding. Five, one cubic yard tippler trucks,⁴⁰ identical to those used at the Torrumbarry works, were used on the tramway and were hauled by horses on the return trip to the heap. With a grade of 1 in 8 to be confronted, when hauling a loaded truck onto the staging, a horse was used for this task as well.⁴¹

At the mullock heap a small number of sidings provided for the storage of empty tipplers and the movement of trucks to points alongside the heap where they were loaded by hand.

Sand

Along with the gravel from Carisbrook, sand was also needed to produce concrete. A sole source of the required grade of sand could not be found but sand that could be mined locally from two locations, when combined, formed an acceptable mix. A substantial deposit of fine sand lay exposed on the inside bend of the Murray River, three kilometres upstream from the work site. A branch from the tramline to the railway siding was laid and extended to the sand deposit, in part hugging the river bank along the way. Close to the sand deposit the alignment was cut into the river bank and now sits below normal water level. Trucks on this end section were hand worked although a steam powered winch was deployed to haul the loaded trucks up the climb from the river bank to level ground.42 A loop would have been provided here to allow the locomotive to drop off empty trucks and collect the fulls. The sand was hauled direct to the bin at the concrete plant but, in a comparable manner to the movement of gravel, any surplus was then hauled back around to the sand dump.

The second deposit, made up of much coarser material, was found in the dry river bed, close to the main tramway, 3.8 kilometres south of the weir site on Gamble's land. Gamble was paid five pence per cubic yard of sand removed.⁴³ A loop siding allowed locomotives to deliver empty, and remove loaded trucks, from here. At the west end of the loop a siding turned off to the south and then fanned into four lines running between mounds of sand. Horse drawn scoops brought the sand from the river bed onto the mounds. No evidence of loading ramps or mechanical loading mechanisms could be found at the site suggesting that loading was most likely performed by hand. The sidings were all level with the mainline here which further points to manpower being used to push loaded trucks into the loop for collection.⁴⁴

Most machinery about the site was worked by steam. There were many boilers present that were fired by firewood and because of this, a copious quantity was needed. Positioned at the west end of the works, quite close to the river, a sawmill was erected behind which sat two long stacks of sawn wood. Bringing wood to the site was a major undertaking over 1921-22 when the works were operating at their peak. A forested area north-west of the weir was designated to be felled to provide the wood, with a branch tramway from the east end of the camp area put down to bring the fuel in. The tramway curved around the rear of the houses at the camp and snaked its way to the timber stacks 750m distant. A fan of nine sidings sat at the southern end of the stacking area while a further group of sidings sat to the north⁴⁵ and accessed the main line stem by trailing points. No direct evidence of how the firewood line was worked has been found however some indirect evidence offers some clues. The access tramway to the firewood mill at the weir site was not packed which means that horse haulage can be ruled out leaving locomotive power the only alternative. Rolling stock used was most probably the long bogie trucks pictured carrying people in some images but absent from views around the weir and railway siding. Parked out at the firewood stacks seems the only place they could have been.

In all likelihood, the two trucks were used separately with a single truck being loaded while the other sat awaiting collection or on the firewood siding at the weir having carried a load in. The Krauss, *Robin*, most certainly would have been used on the line and a loop siding must have been provided on the section of track on the weir side of the firewood sidings.

At the work site, the wood was carried onto a siding that branched from the line that served the store and cement sheds. It passed behind the sheds and then reversed back to the river side of the sawmill. The wood was offloaded alongside the tramway close to the saws. A separate tramline to carry the sawn wood ran between the stacks of firewood and extended across the gravel and sand sidings to enter the boiler house. It was used to move the fuel to the stacks and then to the boiler house as required.

Images of the site taken around November 1922, late in the construction period, suggest that the wood delivery siding had been removed at the time the photos were taken. Most probably, the firewood had been stockpiled over the period 1921 to mid-1922 to the extent that wood gathering had ceased and boilers were being fed from the accumulated stocks.

With much of the floor of the channel to be concreted and with large volumes needed for the construction of the lock and the run-out path for the removable weir trestles, it is easy to see why the Torrumbarry Weir tramway was needed. However, the use of tramways was not limited to bringing in raw materials for concrete production; they were also used to despatch concrete to the cableway for carriage about the site and locomotive, winch, horse and manpower were used to send concrete over tramlines to parts of the site which could not be reached by the cableway.

The principal concrete tramline ran from beneath the mixer, out across the site beneath the cable way. A dozen concrete trucks were used to carry the concrete on this line. It is not entirely clear what was used to move the filled trucks along this tramway but the absence of cables and the convoluted connection to the rest of the tramway network would suggest that horses were used. It is, however, possible that the Krauss, *Robin* was employed in this task.



Probably taken sometime around the middle of 1920, the concrete mixing complex is depicted here. The hoppers holding gravel and sand are evident. To their right sits the boiler house and workshops while, to the left, is the trestle carrying the cement tramway that spans the aggregate delivery tracks. The cement sheds and store are at the rear and in the distance, amongst the trees, the firewood stacks are starting to grow. Photo: State Library of Victoria SR&WSC Collection



An interesting view, probably taken in 1920, at the northern edge of the work site. The sidings leading to the aggregate hoppers and the cement sheds are visible, as is the line leading to the fi rewood stacks. The lack of packing or ballast on the fi rewood line suggests locomotive power, not horse power, was used on this line. Krauss, Robin, sits on the connecting siding leading to the concrete placement track, while the rear of Black, Hawthorn, Julia, protrudes from the engine shed in the left distance. Photo: State Library of Victoria SR&WSC Collection



The loaded trucks of Carisbrook gravel were worked by gravity down to the loading platform where a winch was used to haul the trucks to the top in preparation for tipping the contents into waiting VR rolling stock. The loading platform and the waiting VR trucks are visible to the left in this image. A horse was deployed to bring the trucks back to the mullock heap. Photo: State Library of Victoria SR&WSC Collection



The mullock heap from Chalk's No2 mine at Carisbrook proved to be a cheap and ideal material for use in manufacturing concrete for the Torrumbarry project and several others that followed. The horse is hauling the two trucks in the foreground in preparation for loading. Photo: State Library of Victoria SR&WSC Collection



The concrete tramway was connected to rest of the network by means of a couple of switchback turnouts on the east side of the concrete plant. This arrangement also allowed the trucking of concrete to parts of the lock construction site and, late in the construction period, to the north side where the run-out path for the weir trestles was built. A steeply sloping trestle carried the tramway down into the excavated trench as part of this with a winch deployed to move trucks on this section. Manpower was used to push the trucks elsewhere on the line.⁴⁶

A corrugated iron sided locomotive shed was provided at the west end of the works. A single line of rails branched from the western-most siding to the sand and gravel bins to serve it. A stack of firewood arranged alongside the tramway nearby confirms the locomotives were wood fuelled.⁴⁷

Traffic along the tramway, to and from the siding, was steady over 1921 with regular deliveries of the Carisbrook gravel to be cleared through to the work site where a mountainous pile steadily grew while the deliveries outstripped consumption. Black Hawthorn, Julia, coped well with this work but not without some problems along the way. The requirement to stop often to open and shut gates at paddock boundaries must have been tedious as on many occasions drivers failed to perform the duty and left gates agape. Straying stock led to complaints from farmers until the crews were brought into line.48 But not all issues with local farmers were strictly the fault of the driver and his assistant. An early period of dry weather in October 1921 saw fires break out along the tramway which were attributed to sparks from the engine. The Patho branch of the Victorian Farmer's Union asked the SR&WSC to stop running steam engines until the problem was solved.49 To address the matter, the locomotives were equipped with makeshift spark arrestors that resembled wire tubular cages protruding from their chimneys. As crude as they appeared the modification seemed to deal with the problem as no further complaints were made.



1922 saw work at Torrumbarry reach its peak. By the end of the year most of the concreting work had been completed, and with the lock virtually finished but still marooned on dry land, work then proceeded on removing spoil from the neck of land at each end of the work site. Sufficient earth was left to prevent ingress by the river water should levels rise above expectations.



The river bank fine sand tramway. The tramway was extended around the river bank as sand was excavated and placed into tippler trucks. Quarrying had moved around the bend from this section. Trucks were manhandled along this part of the alignment. Photo: State Library of Victoria SR&WSC Collection



The fine sand tramway snaked its way east from the weir site, passing close to the river in a couple of places. This particular location was close to the point where trucks were winched up from the river bank where the sand was quarried. There would have been a loop siding to enable locomotive operation immediately to the rear of the photographer. Photo: State Library of Victoria SR&WSC Collection

It was then that the track work on the north side of the material bins was pared back to make way for the excavation of the channel on the north side of the works. The long extension of the unloading siding, previously capable of handling a full rake of trucks, was reduced substantially so that only short rakes of three or four trucks could be handled at a time. Before, a locomotive could pull a full rake of around 30 trucks through the unloading process and then remove the rake along the return line. However, when the channel excavation started, the two tracks passing the unloading point were reduced to a connecting set of points and a short stub. Emptied trucks were manhandled through the points and back onto the return line.

Changes were also made to the plant and unloading process at the time the sidings were truncated. The original arrangement allowed a single dump chute and elevator to be used for all grades of sand and aggregate, as a rotating screen atop the bins sorted the materials into the required locations. The reduction in siding length meant a radical change in operation was necessary as only short rake lengths could be dealt with at a time. This would have affected the capacity of the plant substantially. To address this, a third line of rails was laid into the tipping zone and a second aggregate conveyor introduced to serve it. A short loop on the east side of the new track allowed the locomotive to pull its rake into position and





then remove itself from the unloading zone whilst pushing out emptied trucks in the process. The new siding was dedicated to handling the fine sand from the river bank; the material no longer passing through the rotating screen. The coarser pit sand was sent down the original access line along with the Carisbrook gravel and was screened into the required grades as before. The bins area would have been a very busy place indeed around the end of 1922!

Access to the firewood mill for incoming wood traffic was

also removed at this time. As stated previously, the wood was likely stockpiled over the previous 18 months or so to allow for this to occur.

With a plan to have the weir and lock in operation for the summer of 1923-24, work accelerated with two to three shifts working per day and the tramway to the railway siding in full operation with often three return journeys occurring a day. When this occurred, both locomotives were engaged in the work.⁵⁰ Over the 12 months of 1922-23, 7000 cubic yards



Black, Hawthorn & Coy. B/N 1134 of 1897 was of 0-4-2 configuration and featured a blue livery. It was given the name Julia at Torrumbarry. It is pictured at the front of a long line of hopper trucks loaded high with bags of cement passing in front of the office staff quarters. Photo: State Library of Victoria SR&WSC Collection

of Carisbrook gravel, 5700 cubic yards of stone spalls from Axedale and Edgecombe and 2000 cubic yards of the coarse sand were brought over the tramway along with 400 tons of iron and steel.⁵¹ During December 1922 the lock chamber, the concrete floor of the weir area, the removable trestles and the track they were to run on were all completed and work started on the river diversion works. In March 1923, the diversion dam, although still needing further work, was sufficiently advanced to block the flow of the river, raising its level and causing water to flow through the lock for the first time. Six months later the final work on the diversion dam was completed bringing to an end the Torrumbarry Lock and Weir Project.⁵²

The tramway to the railway siding was to remain in operation until the end of 1923 but with the completion of the major concreting works at the end of 1922 there was no requirement for both locomotives to remain. In January 1923,⁵³ the Krauss, *Robin*, was sent to the Glenmaggie Dam project to assist with sand haulage. Other equipment was also despatched to other projects, with 62 side-tipping trucks sent to Waranga Basin during August and September 1923.

A major task was the removal of the Priestman Grab and buildings from Torrumbarry Siding to the weir prior to shipping by barge to Mildura where the construction of Lock 11 was about to start. The tramway was used for this purpose. A final task was the movement of 1300 tons of materials over the tramway for stockpiling at the work site for future emergency use. This included 75 cubic yards of sand and 1075 cubic yards of stone spalls.⁵⁴

The dismantling of the tramway from the railway siding commenced around March 1924. By June the rails had been removed and stacked alongside the lock. Quotes were being sought to ship 100 tons by barge to Mildura for the Lock 11 works. Over July and August 1924, the sleepers and cow pit timbers were sold off.⁵⁵

The post-Torrumbarry movements of Black Hawthorn, Julia, are somewhat hazy. Although not a certainty it is most

likely that it was used for the dismantling of the tramway. With most of the rails despatched by river barge to Mildura it can be assumed that rail removal commenced from the Torrumbarry Siding end of the tramway. Horses could have been employed but with a locomotive available, presumably, it would have been used. There is no evidence of a steam locomotive having been used at Mildura, however, with a railway siding serving the Lock 11 works and with rail and other plant (including the Priestman Grab from Torrumbarry Siding) being sent by barge from Torrumbarry to Mildura,⁵⁶ it seems quite feasible that Julia followed the same path but was then sent away by rail into storage. It is next noted in use at the Yarrawonga Weir works in 1935.

2018

A stand out aspect of the research for this article was the opportunity to inspect the weir and railway siding sites, the alignment of the tramway, the coarse sand pit, the fine sand tramway and the firewood harvesting area. This was critical as, at the outset, only the site of the weir was known. A map showing the alignment of the tramway between the two has yet to be found. This meant ten visits, either alone or with a team of helpers, were needed to try and figure out what went on where. A bi-product of this effort is the forensic knowledge gained of what remains to be seen today, and forensic is not an overstatement! The reality is that there is quite a bit to see, but it is mostly very subtle. The flat terrain meant earthworks were kept to a minimum. There is not a single cutting anywhere on the former alignment and what embankments exist are quite low and unobtrusive.

An unfortunate aspect of the current removable weir is that it is not that which was described in this article. The Murray River undercut the concrete base of the original removable weir and forced a reconstruction that was opened in 1996. In its new form the weir, now fitted with lifting gates and not removable trestles, sits on the Victorian side of the lock. The excavation attached to this destroyed all vestiges of the

earlier worksite. The extent of this is marked on the two site diagrams. Aerial photography in the 1980s would suggest that there would have been much to see if the reconstruction hadn't been necessary.

Elsewhere, there are signs of tramway alignments, but they are often feint and difficult to discern. The alignment to the railway siding is only distinguishable in places because of the scatterings of Carrisbrook gravel along the way. Reference to previous reports in Light Railways, following site visits over recent years, will point to how to locate what remains.

Acknowledgements

With the paucity of SR&WSC records surviving from this period much information for this project was gathered through investigations on site. I would like to thank John Dennis, Peter Evans, Colin Harvey, Bruce McLean, Phil Rickard, Stuart Thyer, Richard Warwick and Chris Wurr for their help scratching around in the bush, dodging the occasional snake, in temperatures that were rarely below 35 degrees!

I would also like to acknowledge and thank Colin Harvey for allowing access to his work summarising correspondence recorded on SR&WSC index cards.

The Cohuna and District Historical Society was most helpful in allowing access to photographic and record archives. I would especially like to thank Yvonne Church for the great assistance that she provided.

Many thanks also to Colin Harvey and Phil Rickard for their work in critical commentary and editing of the text.

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At the head of the fine sand tramway. The formation has been rough prepared for the extension of the tramway. The men visible are engaged in loading a tippler truck. The formation of this tramway along the river bank can only be seen today during times of drought. Once completed, the Torrumbarry weir raised water levels which submerged these workings from view. Photo: State Library of Victoria

SR&WSC Collection

The Hercules Company's Self-Acting Tramway

by Sydney Thow CE, General Manager, 1902

The Hercules Mine, situated on the western slope of Mount Hamilton, a spur of Mount Read, is connected with the terminus of the North-East Dundas Railway at Williamsford by means of an inclined self-acting tramway on the endless-rope system. The slope length of this line is 80½ chains, and the difference in elevation between the Government line and the "send-off" at the mine is 1642 feet. The average gradient is, therefore, 1 in 3.2, the maximum gradient being 1 in 1.5, and the minimum, i.e., the approach to Williamsford terminus, 1 in 8.8.

The permanent way consists of double 2-feet gauge lines of 20 lbs per yard steel rails, spaced seven feet centre-to-centre of tracks. All joints are made with double fish plates, and the rails are dogged to sleepers spaced at 2½ feet centres. The flanges of rails are notched to take dogs, in order to prevent the down creep of tracks, and at intervals on the steep gradients extra-heavy sleepers extend right across both tracks, and are bolted to the rock formation for the same reason.

The controlling machinery house is placed above the level of the main surface tramway, which connects with all the underground workings from which ore is at present produced for sales purposes. This allows of the inclined haulage trucks being run underground in rakes and filled direct from the various ore passes. The distance from the "send-off" to the entrance of No.2 tunnel – the lowest level of the Northern workings – is 9.8 chains, and to the No.4 tunnel – the most southerly portion of the mine workings – is 21.7 chains. Storage bins for ore from upper workings and surface benches are also situated upon the main level.

Plate 1 shows the formation gradients. All cuttings are in rock, and embankments are formed from the spoil therefrom and rock side-cuttings. The average rainfall of about one hundred inches annually called for ample drainage provision in shape of side ditches and culverts.

The controlling machinery comprises two cast-iron grooved wheels, each fitted with dynamometer brake bands, and the brakes are applied through a lever system, with a worm and hand-wheel. The multiplied leverage or pull on brake band is 680 times the pressure imposed at the periphery of the hand-wheel, affording in practice a tension of three to four tons upon each brake strap.

The front wheel is seven feet in diameter, and has three rope grooves; the back wheel is seven-and-a-half feet diameter, with four grooves. The endless rope is led to the lowest groove of the back wheel, and, after traversing a half-circle, leads direct in turn to the three grooves of the other wheel. The maximum bend in rope is, therefore, half-round a seven feet diameter wheel, and the rope leaves the wheel-house from the top groove of the back wheel. (see Figure 3, Plate 2).

The two wheels are placed in tandem, and in the same horizontal plane, guide sheaves being used to change the inclined travel of the rope to a horizontal one. (see Figure 2, Plate 2). The brake bands are of five inches by seven-sixteenths of an inch soft steel, having an ultimate tensile strength of twenty-four tons per square inch, and the brake blocks are 15 x by 3 inches Kauri pine.

The grooved wheels are cast in halves and bolted together; they have 6-inch diameter shafts of forged steel, case hardened at lower ends, and revolve on cast steel pivots. The bearings are of cast iron, with hard gun-metal bushes. The wooden frame work is built of celery-top pine throughout, with the exception of the bed logs, which are of hardwood. These bed logs are set in concrete, and lewis bolted to the rock foundation.

The hauling rope was manufactured by Messrs Bullivant and Company, England, and is 3½-inches in circumference, and weighs eleven tons. [this was a replacement rope, installed in early 1902 – ed.] It is a six-strand seven wire Extra Plough Steel Rope, with hemp core, the rope being closed in the same way as the strands are laid, and having an ultimate (tested) tensile strength of 42½ tons. For convenience of handling, it was ordered in three coils each of 3970 feet in length; three splices were therefore required, and were made each 66 feet in length; the tucked ends, measuring 5ft 6in, were carefully served with tarred twine to correspond in size with the hemp



Plate 1 from Sydney Thow's 1902 paper, showing the incline's gradient profile against the horizontal and vertical distances (in feet). Horizontal distances commence at zero at the top of the counterpoise apparatus and end at almost 5018 feet at the upper loading point – the actual track length being somewhat longer. Vertically, the NEDT rails were 1101ft above sea level, and the top of the incline at 2743 feet – a fair climb if you had to walk!

Touring the West Coast. On 15 February 1927, having arrived on the 2:30pm train from Zeehan, the Governor-General (Lord Stonehaven), Lady Stonehaven, and party visited the Hercules mine. From Williamsford the party travelled the four or five miles to Rosebery for the night. Next day they proceeded to Waratah by one of the Emu Bay Railway's rail motors. The photo was taken from the Elliott Street bridge.

Photo: Tasmanian Mail 2 March 1927



core which they replaced. Its total weight is 11 tons. The trouble of getting this to the top of the hill was enormous, even though it was in three pieces, which afterwards had to be spliced. It was hauled up, little by little, by block and tackle until the top was reached.

The terminal stations of the haulage line are connected by telephone, and the line is operated by a system of electrical bell signals. At the Williamsford end of the tramway the method of dealing with the working shocks and the slacking or taking up of the endless rope caused by temperature variation, is shown on Figure 2, Plate 2. The rope passes over jockey pulleys, round a seven feet grooved wheel attached to a carriage frame, which traverses an inclined road [4 ft gauge]. To this carriage is fastened an adjustable counterpoise weight. A breast work of timbers is built at the lower end of the inclined road to safeguard vehicles standing upon the Government [railway] line, should by any chance the balance frame become detached.

To reduce friction and minimise wear, the rope is carried over rollers wherever it comes in contact with the formation. Composite rollers, eight inches in diameter, made of Tasmanian Blue Gum, with cast-iron flanged ends and steel spindles, are found to give most satisfactory results. At places where the rubbing is unusually severe, notably at the $31\frac{1}{2}$ and the $40\frac{1}{2}$ chain distances, cast-iron rollers nine inches in diameter are substituted for the wooden ones.

The rope is kept well coated with a mixture of heavy Nubian oil, resin oil, and Stockholm tar. The brake wheel bearings are fitted with Stauffer's patent force lubricators feeding a grease compound, and the brake band surfaces are lubricated with Graphite paste.

All trucks are attached to the rope per medium of a chain and grips. These grips – see Figure 4, Plate 2 – are designed on the cam and lever principle, and are made of wrought material throughout. The pivot pins are of crucible steel 15/16-inch diameter, and the cam levers are of Lowmoor iron. The chains are 7/16-inch diameter best charcoal iron crane chain having a breaking strength of 6½ tons. The maximum gross load permitted for any individual truck upon one grip chain is 1½ tons, and as the resistance on the steepest gradient is 1263 lbs per ton, the safe factor for grip chain is eight, which is not too high, as the intense cold experienced in winter months renders all couplings brittle.

The quick variations in gradient make it necessary to attach the trucks to the rope in such a manner that the rope is free to rise and fall in accordance with the position of the loaded points. By reference to Plate 1, showing the formation line, it will be observed that the section generally falls short of allowing the rope to take the form of an ideal 'catenary' curve. The distance between the rope and the track being a variable one, prevents, in a large measure, the adoption of any system of continuous working with automatically actuated grips, and, on the other hand, the gradients are so disposed that any attempt to adopt a "tail-rake" system of working, without exterior power, would be hampered by the fact that the returning empty rake would take a position upon a rising grade of 1 in 1½ when the corresponding loaded rake



Plate 2 from Sydney Thow's 1902 paper, containing four figures. The haulage, built a couple of years before Thow's appointment, was greatly improved during his tenure. A much stronger wire rope was installed, more substantial counterpoise machinery at the bottom, new grips for the trucks to attach to the rope and regrading of the line below the Elliott Street bridge were carried out. The incline's capacity was almost doubled.

was upon a down grade of 1 in 5.2. It is found, therefore, that uploading is handled to best advantage by adopting the present system of a continuous rope with distributed loading.

The trucks are spaced upon both up and down roads, opposite each other, at 350-feet intervals; therefore, an empty truck arrives at the top, and a loaded truck at the bottom, simultaneously. The trucks are sometimes coupled in pairs at the same station, and the average number of trucks attached to the rope at one time is thirty-six. The iron skip trucks carry 12 cwts of bulk sulphide ore or eight cwts of bagged gossan ore. The wooden trucks carry one ton of bagged ore, and are used for the uploading of general goods and mine timber. In general working, the number of truck journeys each way per shift of eight hours averages 200 to 250. The percentage of up to down loading is not up to the tram's capacity, which is about four to one. Seven men are required to operate this haulage; the labour costs, therefore are about sixpence per ton of loading. The capital cost of tramway and plant to date is about £,8750.

At Williamsford terminus the bulk ore is emptied into storage bins which discharge direct into the railway trucks, and the bagged ore is passed down a wood shute which also delivers into the railway trucks.

In addition to fulfilling the requirements of the Hercules mine, general goods and merchandise are carried for the public at scheduled rates, and about 7000 tons of ore has been carried for the (British) Mount Read Mining Co Ltd.

End Notes:

cwt = hundredweight, 112 lbs or 50.8kg.

This paper is dated 30 June 1902 and appeared in the annual report of the Secretary for Mines, Hobart, 1901-02. It was also presented at the Sydney University Engineering Society on 12 Nov 1902 with some very minor variations.

Minimal punctuation changes have been effected to this re-print.

Sydney Thow was born in 1873 in London, England, the son of William Thow and Agnes Thow (née Noble). Together with his parents, he migrated to South Australia where, in 1876, his father was appointed Locomotive Engineer to the SAR. Sydney's primary and secondary education was done in Adelaide. In 1889 his father was appointed Locomotive Engineer with the NSWGR and the Thow family moved to Sydney.

Young Sydney first made the news in 1896 when the Institution of Civil Engineers, London, awarded him a prize for a paper which he presented describing the construction of the Molong to Forbes railway, where he was engaged as a junior member of Baxter & Sadler's staff.¹ Sometime after this he was employed by the Smelting Co of Australia erecting smelters at Dapto, then at Queenstown erecting more smelters for the Mt Lyell Mining & Railway Co.²

In April 1900 he was engaged by the Hercules Company to advise on the erection of smelters at Williamsford. Consultation work was also done for the Magnet Mining Co in relation to a rail connection with the Emu Bay Railway.³ His report to the Hercules company was detailed, measured and well received and his services were retained as mine manager.⁴ He oversaw various remedial works on the haulage tramway and seems to have been very industrious around the mine.

In early 1905, the Hercules' directors tried to reduce workers' pay to those prevailing in Zeehan (seemingly ignoring that the men lived in a very remote area in often unpleasant conditions). A strike was called on 1 February. Thow attempted to engage non-union miners, to no avail. The company retaliated by closing the mine in early March; Thow was made redundant.⁵

Thow returned to the mainland. In Melbourne in August 1906, he married Annie Sabine, a young lady he had known since his youth in South Australia.⁶ Marriage, hopefully,



From the camera of Henry Judd, showing the transhipment facilities. The ore bins (right) have been fitted with a roof to keep out rain, while (left) a roofed bagged-ore store has been erected, served by a new siding. The incline haulage with its upgraded counterpoise carriage and tensioning gear is in the centre. In the foreground the TGR's new Garratt locomotive KI, freshly painted and lined-out, on possibly its first trip to Williamsford on 12 January 1910.

curbed his propensity for the 'high life'. (In 1902, whilst on holidays, he was robbed at an East Melbourne brothel by one of the 'ladies'!⁷) The couple settled in Sydney. On 21 June 1907 it was announced that he had been appointed mining manager of the Chillagoe Mining Company.⁸ Three days later he committed suicide – insomnia, and narcotics to alleviate same, being the reasons given at the inquest. He was 33 years of age. He is buried in Waverley cemetery in Sydney, along with his mother and father.⁹ – *Notes by Phil Rickard*

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- 5. North Western Advocate & Emu Bay Times 2 Feb 1905; 29 March 1905
- 6. Critic, Adelaide 5 Sept 1906; Chronicle, Adelaide 1 Sept 1906; Observer, Adelaide 8 Sept 1906; Daily Telegraph, Launceston 27 Jun 1907
- 7. The Argus, Melbourne, 26 May 1902; Truth, Sydney 29 June 1902
- 8. Examiner, Launceston 22 June 1907;
- Daily Telegraph, Sydney 26 June 1907; The Newsletter, Sydney 29 Jun 1907; Australian Dictionary of Biography; headstone - Waverley cemetery

TGR plan showing 1899 rearrangements at Deep Lead (Williamsford), with the proposed siding for the Hercules mine and how the new ore bins will be arranged next to that siding. Dated February 1899, several years before Sydney Thow installed the substantial counterpoise machinery and structure. [Note: plan has been condensed.] Courtesy: Tasmanian Archive and Heritage Office P1330-1-5461





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

QUEENSLAND

CAIRNS KURANDA RAIL SERVICES, Cairns (see LR 251 p.23)

1067 mm gauge

Walkers B-B DH 1107 (659 of 1971) has been sold to *The Q Train* on the Bellarine Peninsula Railway in Victoria and departed Cairns by road transport on 19 January. Walkers B-B DH 1106 (658 of 1971) which has been out of use for

almost twenty years, is expected to return to service in the near future. Both of these locos were built for the Emu Bay Railway in Tasmania. Facebook – *The Q Train* 1/18; Facebook – *The Savannahlander* 1/18, 2/18

MSF SUGAR LTD, Mulgrave Mill

(see LR 259 p.26)

610 mm gauge

An isolated siding served by roll on, roll off semi-trailers exists at Glen Broughton on the Yarrabah Road about 6 kilometres beyond the end of the Pine Creek line. The road transport shuttles between the rail head and the siding which serves an isolated pocket of cane. Anthony McIlwain 12/17; Allan Macca Lamberton 12/17

MSF SUGAR LTD, South Johnstone Mill (see LR 259 p.28)

610 mm gauge

Com-Eng 0-6-0DM 27 (AI57111 of 1975) has continued in service with the navvies since its external makeover but was still not carrying any identity by December. Some of this mill's locos have been placed in slack season storage in the loco shed at the former Mourilyan Mill site. Bill Horton 12/17; Luke Horniblow 2/18

PROGRESS RAIL SERVICES, Redbank

(see LR 259 p.28)

1067 mm gauge Clyde Co-Co DE 1720 (66-502 of 1966), the workshops shunting loco, was seen in use on 11 January. Leon Harris 1/18

TULLY SUGAR LTD

(see LR 259 p.28)

610 mm gauge

The mill's three brake wagons were seen lined up in the mill yard on 21 December. They are Tully Sugar 6 wheeled brake wagon built in 1989 (built using the frames and running gear of Clyde 0-6-0DH DHI-4 of 1954), Tully Sugar bogie brake wagon 3 built in 1996 and ex Mulgrave Mill NQEA bogie brake wagon built in 1995. The NQEA unit was painted in gray primer and has not entered service yet. Luke Horniblow 12/17

WILMAR SUGAR (HERBERT) PTY LTD, Herbert River Mills

(see LR 259 p.28)

610 mm gauge

EM Baldwin B-B DH Wallaman (6400.3 4.76 of 1976) and EM Baldwin 6 wheeled brake wagon BVAN 2 (7065.5 6.77 of 1977) have remained at Victoria Mill. On 19 December, Macknade Mill's Clyde 0-6-0DH 16 (DHI.1 of 1954) went to Victoria Mill for slack season use by the navvies. On the same day, EM Baldwin B-B DH 19 (7070.3 4.77 of 1977) and Solari bogie brake wagon BVAN 3 built in 1994 went to Macknade from Victoria. Clyde 0-6-0DH Lucinda (65-436 of 1965) returned to Victoria from Macknade on 22 December and on the same day Macknade's EM Baldwin B-B DH Darwin (6171.1 9.75 of 1975) went to Victoria for slack season final drive maintenance. 19 is being fitted with a Mercedes Benz V8 motor and Allison transmission at the Macknade Mill loco shed this slack season. The motor is the same as that being fitted to the Walkers locos at Proserpine Mill but



EM Baldwin B-B DH locos Shannon (7126.1 5.77 of 1977) and Foulden (7220.1 6.77 of 1977), George Moss double 4 wheeled brake wagon B VAN 2 (CV001-WR20911-85 of 1985) and EM Baldwin B-B DH Charlton (9562.1 6.81 of 1981) at the Farleigh Mill locoshed on 30 January. Photo: Mitch Zunker





Above: On 9 December, South Johnstone Mill EM Baldwin B-B DH locos 26 (7244.1 8.77 of 1977) and 25 (6470.1 1.76 of 1976) combine forces to service a siding on Top line, a short and decrepit branch in the Lower Cowley area. Photo: Luke Horniblow

Left: South Johnstone Mill Com-Eng 0-6-0DM 27 (AI57111 of 1975) in service on the ballast train on 22 September following its external revamp. Photo: Bill Horton

Below: South Johnstone 26 is shown leaving the siding on Top line with the full bins while 25 waits to pull forward then propel its rake of empties into the siding. Photo: Luke Horniblow





Above: Tully Mill's brake wagons parked in the mill yard on 21 December. Left to right are Tully Sugar bogie brake wagon 3 built in 1996, NQEA bogie brake wagon built in 1995 and Tully Sugar 6 wheeled brake wagon built in 1989 (built using the frames and running gear of Clyde 0-6-0DH DHI-4 of 1954). Photo: Luke Horniblow

Below: Victoria Mill's Clyde 0-6-0DH Dalrymple (70-709 of 1970) stabled with the bridge wagon at Rinaudos siding on the outskirts of Ingham on 18 January. Photo: Luke Horniblow



will be derated to 450 horse power. The driver's seat will have the controls in the armrests and the cab doors will be moved to rear of the side walls. BVAN 3 is receiving an above deck revamp and both units will be repainted and returned to Victoria Mill for the crushing season. Assembly of one hundred and eighty new 11 tonne bogie bins commenced at the Macknade Mill truck shop in early February. Most components for these bins have been manufactured at the Wilmar workshop in Ingham and they are being fitted with Bradken design Willison couplers. The QR diamond crossing at Ingham Station on Victoria Mill's main line west had been removed for maintenance by mid January. Clyde 0-6-0DH locos 16 and Dalrymple (70-709 of 1970) had been placed west of Ingham prior to the diamond's removal so as to be available for navvy duties in the areas cut off from the mill. Editor 12/17, 2/18; Luke Horniblow 1/18; Herbert River Express 3/2/2018

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

(see LR 259 p.28)

610 mm gauge

Some new 6 tonne bins were assembled at Kalamia Mill for Invicta Mill during the latter part of the 2017 crushing season. Kathy Higgs 2/18

WILMAR SUGAR (KALAMIA) PTY LTD, Kalamia Mill

(see LR 259 p.28) 610 mm gauge Some new 6 tonne bin

Some new 6 tonne bins for Invicta Mill that were assembled at Kalamia Mill were test run

through the system here in the last week of the 2017 crushing season. Kathy Higgs 2/18

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

(see LR 259 p.30) 610 mm gauge

A new 2,300 hectare farm at Clairview is part of a programme to increase throughput of cane by 430,000 tonnes over the next five years. This farm is 35 kilometres south of the existing rail head at Carmila. One hundred and seventyfive new 4 tonne bins at a cost of \$1.2 million are being manufactured in house this year. In previous years, approximately 100 new bins annually have been added to the fleet. \$600,000 is being spent on a major upgrade of the bin handling station at the mill which will simplify the process of uncoupling and recoupling bins in this area. Walkers B-B DH 4 Carmila (676 of 1971 rebuilt Bundaberg Foundry 1996) is at Proserpine Mill this slack season being fitted with a Mercedes-Benz V8 motor, Allison transmission and a Renk reversing gearbox. The Gmeinder final drives will be the only items not replaced in the loco's drive train.

Daily Mercury 21/12/2017; Tom Badger 2/18

WILMAR SUGAR (PROSERPINE) PTY LTD, Proserpine Mill

(see LR 259 p.30) 610 mm gauge

Clyde 0-6-0DH 6 (62-272 of 1962) which has been out of service for some years, was taken away for scrap in February. All useful items had been removed beforehand. Com-Eng 0-6-0DH *Oakenden* (FB3169 of 1963), ostensibly a Burdekin loco, has remained at Proserpine. Walkers B-B DH 11 (628 of 1969 rebuilt Walkers 1996) is being fitted with a Mercedes-Benz V8 motor, Allison transmission and a Renk reversing gearbox this slack season. The Gmeinder final drives will be the only items not replaced in the loco's drive train. As well, 11 is being fitted with RSU remote control equipment. Also receiving similar treatment with the exception of the RSU equipment is Plane Creek Mill's Walkers B-B DH 4 *Carmila* (676 of 1971 rebuilt Bundaberg Foundry 1996).

Tom Badger 2/18

NEW SOUTH WALES

BLUESCOPE STEEL, Port Kembla Steelworks (see LR 256 p.30)

1435 mm gauge

Pacific National, the rail operator, was expected to cut up English Electric Australia Bo-Bo DE D19 (A-033 of 1960) and General Electric Australia Bo-Bo DE locos D38 (A-239 of 1972) and D45 (A-273 of 1975) behind No.3 loco shop at Steelhaven during February. Chris Stratton 2/18

GOULBURN RAIL HERITAGE CENTRE, Goulburn

(see LR 254 p.32)

1435 mm gauge On 13 January, Walkers B-B DH locos 7319 (678 of 1972) and 7333 (695 of 1972) were seen

stored out in the open here for K & H Ainsworth



Pacific National's General Electric Australia Bo-Bo DE D38 (A-239 of 1972) awaiting its fate at the Steelhaven loco shop of the Port Kembla Steelworks on 25 January. Photo: Chris Stratton



Above: Genesse and Wyoming Australia Downer EDI Co-Co DE GWN003 (12-2592 of 2013) and Clyde Bo-Bo DE 1302 (56-116 of 1956 rebuilt MKA 93-BHP-006 in 1995) at work on the Whyalla iron ore railway on 30 December. Photo: Daven Walters **Below:** TasRail's Express Service 4wBE Bunter the Shunter (ES 607 of 2017) at the South Burnie Wheel Maintenance Centre on 24 January. Photo: Philip Graham



Engineering. Walkers B-B DH 7322 (684 of 1972) owned by the same firm, was seen inside partially dismantled and being worked upon in mid January.

Paul Hutchinson 1/18; Brendan Winkler 1/18

K & H AINSWORTH ENGINEERING PTY LTD, Goulburn

(see LR 254 p.32)

1435 mm gauge

Walkers B-B DH locos 7319 (678 of 1972) and 7333 (695 of 1972) were still in storage at the Goulburn Rail Heritage Centre, Goulburn on 13 January. Walkers B-B DH 7322 (684 of 1972) also owned by this firm was being worked upon there in mid January.

Paul Hutchinson 1/18; Brendan Winkler 1/18

SOUTH AUSTRALIA

GENESSE & WYOMING AUSTRALIA, Whyalla

(see LR 258 p.28) 1067 mm gauge

A visit to this iron ore haulage system on 30 December saw the following identifiable locos

at work. Goodwin Co-Co DE 907 (83826 of 1960), Downer EDI Co-Co DE GWN003 (12-2592 of 2013) and Clyde Bo-Bo DE 1304 (61-236 of 1961 rebuilt

MKA 93-BHP-003 of 1995). Daven Walters 12/17

TASMANIA

TASRAIL, South Burnie Wheel Maintenance Centre

1067 mm gauge

An Express Service Ltd Model ES600 4wBE (ES607 of 2017) shunting loco named *Bunter the Shunter* has been supplied as part of a wheel lathe package. It is used to position rolling stock for attention from the new underfloor wheel lathe, is entirely captive to the maintenance depot and was built in Bulgaria for the German supplier of the wheel lathe.

Peter Medlin 1/18; Philip Graham 1/18; John Browning 1/18

OVERSEAS

FIJI SUGAR CORPORATION

(see LR 259 p.30)

610 mm gauge

Eco Trax Fiji has continued to advertise its business through January and refers to its vehicles as electric assisted bicycle carriages. It operates Monday to Saturday from its base at Cuvu on the closed portion of the Lautoka Mill system. Journey time is approximately three hours including an hour at a deserted beach.

Eco Trax Fiji 1/18

Maintenance Centre Shunting Units

In recent years, small shunt units for moving rolling stock have been introduced at a variety of sites throughout the country. Many are battery electric (often with remote control, some road/rail vehicles) and are captive to a maintenance facility or freight depot. A variety of European builders have supplied such units in recent years. Typical applications are at light and heavy rail maintenance centres, wheel lathe facilities, and at freight depots. The manufacturers concerned all have web sites where examples of their product range can be seen.

Windhoff Bahn- und Anlagentechnik GmbH, Rheine, Germany supplied a 1067mm gauge Model RW60 4wBE shunt unit to Bombardier Transportation Australia Pty Ltd's electric train maintenance facility at Wulkuraka, Queensland, in about 2016.

Zagro Bahn- und Baumaschinen GmbH, Bad Rappenau-Grombach, Germany, supplied a standard gauge Unimog Model U423 road/ rail diesel unit in 2016 for use at the Canberra Metro light rail depot.

NITEO BV, Nibbixwoud, Netherlands, have supplied several units to Australian customers. A 1600mm gauge Model 4000E 4wBE shunt unit (B300 of 2012) was supplied to the Craigieburn depot of Metro Trains in Melbourne. A standard gauge Model 2000-C 4wBE shunt unit (B332 of 2012) was supplied to Bombardier's Gold Coast light rail depot. It was later returned to Europe and has been replaced by a Model RRM-3000 road/rail 4wBE (B350 of 2014). A standard gauge Model RRM-3000 road/rail unit (B357 of 2014) was supplied to Roy Hill Holdings at Port Hedland.

Zephir SpA, Modena, Italy, supplied a large number of road/rail diesel-engined units and 4wBE shunt units to Pacific National and QR National between 2006 and 2012. More recently, a standard gauge Model LOK 6.100S diesel road/rail unit is at United Goninan's Auburn Heavy Maintenance Centre in Sydney, a standard gauge Model LOK 16.300 diesel road/rail unit is at Roy Hill Holdings at Port Hedland, and Sadleir's Logistics have at least one Zephir, with a Model CRAB 2100E 4wBE at Greenacre in Sydney.

Express Service Ltd, Ruse, Bulgaria, supplied a 1067mm gauge Model ES 600 4wBE (ES 607 of 2017) to Hegenscheidt-MFD GmbH, Erkelenz, Germany, as part of a \$5.5m wheel lathe package for installation at TasRail's South Burnie wheel management centre. It has been named *Bunter the Shunter* after a deceased local locomotive driver.

Thanks to Peter Medlin, Philip Graham and Scott Jesser for some of the information provided in this report. John Browning 1/18



LRRSA NEWS

MEETINGS

ADELAIDE: "Don River Ruston locomotive and selected DVDs"

We will discuss the Don River Ruston and Peter Letheby will present some of his DVD's. News of light rail matters will be welcome from any member. Intending participants would be well advised to contact Les Howard on 8278 3082 or by email Ifhoward@tpg.com.au, since accommodation is limited.

Location:

1 Kindergarten Drive, Hawthorndene. **Date:** Thursday 5 April 2018 at 7.30pm

BRISBANE: "Railways of Panama and Columbia"

Dave Rollins will be showing photos of his recent trip to Panama and Columbia. He will also describe the details of both fascinating systems.

Location: BCC Library, 107 Orange Grove Road, Coopers Plains.

Date: Friday 20 April 2018 at 7:30pm

MELBOURNE: "John Phillips photo collection"

Well-known railway photographer John Phillips will be presenting a selection of his excellent photo collection to members. There will be a mixture of both main line and light railways featured. Come along and enjoy what will be a fascinating evening of entertainment.

Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.

Date: Thursday 12 April 2018 at 8pm.

SYDNEY: "Lartigue Monorail in Ireland" PLEASE NOTE: Due to the next meeting date clashing with Anzac Day the new altered date will be 2 MAY.

Guest speaker Basil Hancock will be talking about the Lartigue Monorail, which was located in Listowel, County Kerry, Ireland. This unique steam operated system ran from 1888 to 1924, and carried passengers, livestock and freight along a rail supported on A-shaped trestles. He will describe its development, its life in Ireland, the abortive French Lartigue line and the potential high speed developments. He will conclude with a first hand look at what's left and show the amazing replica Lartigue line now operating in Listowel.

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: NOTE ALTERATION: Wednesday, 2 May 2018 at 7:30pm

Obituary

Queenslander Bill Henderson passed away on 3 December 2017 at the age of 100. He was a professional railwayman who rose to the rank of Principal Designing Engineer with Queensland Railways. Of particular interest to readers of "Light Railways" is that more than 60 years ago he took a close and active interest in industrial railways in Queensland. For example, he amassed significant detailed information on the many small underground rail operations in the West Moreton coalfield which otherwise would largely have escaped notice.

WW "Bill" Henderson

Bill was a true gentleman whose generosity was shown in the way he went to great pains to document at length in correspondence his knowledge for the benefit of people such as myself. Just a few months ago he penned a brief note to explain a little-known detail of railway manufacturing activity in Ipswich.

Bill's life stands as a shining example of courtesy, propriety and generosity to others, an example we would do well to emulate. John Browning

Obituary

Well-known and respected Victorian railways preservation pioneer, Bill Ferris passed away on Christmas Eve, 2017. Nonagenarian Bill, had not been well for quite some time and there were times when it was thought he would not make his ninetieth birthday on November 7. Fortunately, that day did roll around and the Walhalla Goldfields Railway was able to throw a surprise birthday celebration at Walhalla for him. Bill arrived from Thomson on the Emu Bay Railway 10 class loco, which was largely the result of his work. This was to be his last ride on the WGR. Bill was one of the earliest of the railway preservationists in Victoria, if not Australia, possibly even pre-dating Puffing Billy in some ways.

Bill saved all three locomotives from the 2 ft 6 in gauge west Melbourne Gas Works railway, well after the gas works closed down. Their location had defied many people's attempts to rescue them, and some of the suggested methods of removal could well have caused them damage. Bill devised a way to safely remove them. As a result all three locomotives are still in existence with two operating on the Puffing Billy Railway and the third some months off re-entering service there. Bill built a circular track in Walhalla township and gave rides around it using one of these locomotives.

Bill was member number four and volunteer number four of the Walhalla Goldfields Railway as he enthusiastically joined up immediately he found out that Bernie Holmes, Andrew Stephens and Robert Ashworth were working towards establishing a Society with the express intention of rebuilding the more impressive parts of the rugged 2 ft 6 in gauge Walhalla Railway along the original right of way. Bill, along with the other three pioneers of the WGR, was successful in keeping the project on course with correct engineering and heritage standards and controls.

Bill and many others stuck to their guns and adamantly demanded the new Walhalla Railway must be rebuilt not only to the correct gauge of 2 ft 6 in, but also to Victorian Railways

Bill Ferris

Survey and Infrastructure Standards, when it would have been very simple to choose one of the other gauges, 2 foot or 90 cm gauge, where locos and rolling stock would have been easier to source. In the end, common sense prevailed, even down to the weight of the rail procured. *Steve Holmes*



Above: Bill Ferris on the right, with his hand on Carbon, one of the ex-West Melbourne Gasworks locomotives he rescued. LRRSA President Bill Hanks, on the left, was Carbon's fireman on this day. 26 August 2007. Photo: Frank Stamford

Below: The three locomotives that were retrieved from the West Melbourne Gasworks by Bill Ferris in 1962, all photographed on the Puffing Billy Railway in 2006-07. From left to right, Carbon, Couillet 0-4-0T B/No.986 of 1889; J C Rees, 2-4-2ST – rebuilt from John Benn, Couillet 0-4-0T B/No.861 of 1886; and Sir John Grice, Peckett 0-4-0ST B/No.1711 of 1926. Photos: Frank Stamford



Mount Samaria Tour – 25 and 26 November 2017

The Mt Samaria tour took place over the weekend of Saturday 25 Sunday 26 November 2017 and was attended by 15 members. A reconnaissance trip a month earlier had enabled us to fine-tune the final itinerary and verify the location of various landmarks.

In hindsight, we were very lucky to have scheduled the tour on this weekend as the following weekend, Melbourne and Victoria were hit by "the Mother of All Storms" where it rained continuously over the weekend and over 150 mm of rain fell in nearby Euroa.

The members met at the old Victorian Railways Mansfield station on Saturday at 10am and proceeded into the beautiful Mt Samaria State Park. We did a short detour to the Rocky Point lookout with its spectacular views to the south east. Next stop was the Spring Creek sawmill site and seasoning kilns which was one of the highlights of the tour. The members had lunch here and spent time exploring the many features of the site which were carefully documented on Peter Evans' plan from the previous 1998 tour notes.

After lunch, the members drove up Butchers track and parked about 500 metres from the winding station at the head of the incline. The members walked down to the winding station and explored the site. There are substantial concrete foundations as well as a smaller Humble and Co. (Geelong) vertical boiler (now on its side) and cast-iron base. A sprocket wheel set lies nearby which appears to be part of a smaller winch, possibly used to install the incline.

The members drove part-way back along Butchers track, then walked the outlet tramway back to the Spring Creek sawmill site. We passed several sections where wooden rail and sleepers were evident, although not much remains after almost 100 years. We found evidence of a collapsed trestle bridge as well as sections of rock embankment which had been installed over the soft ground at the headwaters of Spring Creek.

Back at the Spring Creek sawmill site, the members retrieved their cars on Butchers track and made their way out of the Park to the Blue Ridge creek campsite. Here the group split into two, those heading back to Mansfield for dinner and staying overnight, and those camping out at the Lazy J property on Holland's creek, which ran alongside the G H Bell and Son's tramline. Access to Lazy J was arranged by fellow member Chris Holliday who we met on the Otway tour in November 2016, and was one of the catalysts for the Samaria tour. Lazy J is accessed via Jones' Road however we were unable to check the entire route on the reconnaissance trip due to seasonal road closures. We assumed wrongly that because we had travelled easily on both ends of Jones' road, then the middle part must be similarly passible to 2WD. Unfortunately, substantial erosion and flooding of the track through the middle pine plantation section meant it deteriorated into 4WD only and there was no going back due to the steep descent.

After negotiating many wearisome diversion banks and deep ruts, four muddy vehicles emerged at Jones' Camping Reserve, the former site of G H Bell's sawmill. We were most grateful to be back on a 2WD road again and only minutes from our campsite at the Lazy J property. We inspected the old tramline as it passed the boundary of Lazy J and that night we cooked a hearty meal and celebrated around a lovely camp fire.

On Sunday we re-grouped at Tatong at 10am near the replica timber trolley. Some members had already visited the site of the broad-gauge station to the west of the town. We travelled along Tiger Hill Road to investigate sections of the McCashney and Harper tramway as it crossed the trig track about 5 km from Tatong. Scott Gould located the tramway on the reconnaissance trip and we taped a few kilometres to enable the members to follow it more easily this time.

Much like the outlet tramway at Spring Creek the day before, there were several sections of wooden rail and sleepers and we found evidence of a large collapsed trestle bridge. We were grateful that this was dry forest country and that these wooden artefacts were still in-situ. Quite a contrast to the wet Otways.

We travelled back to Tatong and followed the Tolmie Road south to the Spring Creek Road turnoff. About 3 km further on, we stopped at the Thompson mill site which was located at the bottom of the Mt Samaria incline and the opposite end to the winding station we visited on Saturday. The members tried to find the bottom of the incline, however rain started to fall heavily, so we abandoned the search for next time and drove to Mansfield for a late lunch.

The members re-grouped at the old Mansfield station at 2pm and decided not to visit Sawmill Settlement because of the threatening skies and the late hour. The members said their farewells and headed back to their respective homes. I would particularly like to thank Peter Evans, Mike McCarthy, Scott Gould, Phil Rickard and Chris Holliday for helping me plan a sensational tour. *Simon Moorhead*



Members pose for a group photo at the winding station at the top of the Mt Samaria incline. Photo courtesy of Owen Gooding



Speed Limit 20 Plus The story of the narrow gauge branch lines of the Victorian Railways

by Edward A Downs

164 pages on art paper, 210 x 135 mm portrait format, hardcover, 78 photographs – all in black and white, and track layouts. Published 2017 by Puffing Billy Preservation Society. Available from LRRSA sales at \$49.95 (\$44.95 to LRRSA members), plus postage.

This is a high-quality reprint with minor revisions and additional material of a book originally published by the Australian Railway Historical Society Victorian Division in 1963. The book describes the 2 ft 6 in gauge railways which were operated by the Victorian Railways. The original *Speed Limit 20* commanded prices sometimes exceeding \$400 on the second-hand book market. The reason was that it contains a vast amount of information, with very few errors, in a very compact well laid out format.

The original book included chapters on the locomotives, rolling stock, each of the five railways, and some proposed lines. Maps, gradient profiles, and track layouts are included. The new version very closely follows the original in terms of page size, content, layout, and illustrations. In terms of quality the new version is superior to the old in every respect: the printing, the paper, the binding, and the photographic reproduction. Much more care has been taken with the cropping of locomotive and rolling stock photographs than was the case in the original version.

The photographs are reproduced better, in some cases startlingly so, like the photograph of Walhalla on page 114. Eleven of the original photographs have been replaced by different photographs illustrating similar content. In all but one case the replacement photographs are superior or more interesting than those they have replaced.

A few corrections have been made to the original text, but unfortunately these changes have not been identified by the publishers so I went hunting for them. Those I found were: delivery dates of locomotives on page14; location of the air pump on early NA class locomotives on page 16; livery of early NA locomotives on page16; and significant changes to the Wangaratta –

Whitfield station histories on page 39. After page 39 I did not find any changes.

The original book ended at page 130 and no attempt has been made to update it to cover subsequent events. It describes the situation as it existed in 1963. As was normal with railway books at the time, no information is given on sources, but I believe the text is based on a combination of official sources and the author's own careful inspections of the lines.

The new book includes a disclaimer on page 4 to the effect that "Readers are cautioned against regarding this book as an authoritative source of accurate historical information on the narrow-gauge lines built and operated by the Victorian Railways," That may give the unfair impression that the text has many inaccuracies. I believe the text gives an accurate description of these railways as they were in the last few decades of their lives, and gives a fair summary of the earlier years of their lives. In such a compact volume, it would not be reasonable to expect a full history of each railway, or each item of rolling stock.



One error – of relevance to timber tramway enthusiasts – which has been carried over from the first edition is the statement on page 50 that a timber tramway came into Belgrave station. Many people have searched for documentary and photographic evidence to support this without success. This tramway ran through Sherbrooke Forest and terminated at the old level crossing on the Gembrook end of the Monbulk Creek bridge. From there the timber was transported by road to Belgrave station on the route described as tramway in the book.

Pages 133 to 164 are all new and describe subsequent events relating to all five VR 2 ft 6 in gauge lines, including details of locomotives and rolling stock currently on the Gembrook and Walhalla lines, and what remains of the other three lines. Twenty-six new photographs are included in this section.

Contrary to information contained in some of the advertising of this book, it does not contain an index. But because of the structure and layout

it is not too difficult to find information quickly. The print run was limited to 1000 numbered copies, most of which are already sold. I hope it will be reprinted, as a book like this deserves to be permanently available – as long as the Puffing Billy and Walhalla railways continue to operate there will be a continuing demand and need for a book like this. *Frank Stamford*

On Splintered Rails The Era of the Tasmanian Bush-Loco 1873 – 1974 Volume 1

by Mark and Angela Fry

Self published 312 pages, 280 x 240mm, large format, hard cover with dust jacket, and soft cover, 271 photos, 38 diagrams and plans. Glossary, bibliography, references and index. isbn 9780995444881. Limited edition, only available from the authors markfryoldina4@ gmail.com

About ten years ago I heard rumours from across Bass Strait that a "big book on Tasmanian logging locomotives" was coming. Well, Volume One has now arrived! Said to be the first of several volumes, to cover in great detail every locomotive, rail tractor and mechanical contrivance ever used on Tasmania's logging and sawmilling tramways, from 1873 to 1974.

This volume is essentially an introduction to the series and covers, in six chapters, the processes of sawmilling in some detail. Chapters cover the selection and felling of trees, the hauling to the tramway's log landing, the tramway itself and its structures, its rolling stock, the sawmills themselves, their machinery and processes. A final chapter, all 86 pages of it, covers the locomotives – and a varied lot they were.

General trends are followed, one-offs investigated and some of the myriad of locally-built locomotives and their builders are examined in word, photograph and diagram. Steam locomotives with vertical or horizontal boilers, geared or direct drive, articulated or



not, foreign or Tasmanian-built, 'Stephenson' layout or converted steam trucks; all get careful attention. Also included are those locomotives that 'changed sides'; starting as steam powered but being rebuilt into internal combustion machines in later life. Then there are the internal combustion locomotives – we are told there were over sixty of them and a representative cross-section get suitable treatment.

Of course, not every locomotive is mentioned in this volume, it is just the overview – a precursor for the following volumes. This volume contains a huge amount of detail (sometimes too much), and includes many anecdotes from those who worked on or around the bush tramways in the later years of the era. It is a book one can dip into at will – you will always learn something new, I certainly did.

So, to the matter that most 'readers' want to know – what about the pictures? There are over 300 photos and drawings, the photos (bar twenty or so colour ones) all being duo-tones. Some have been enlarged beyond what the definition will stand, but most are good though a number seemed to have been reproduced a bit on the dark side. Some have been bled to the page edges to no real purpose – the quality of the image not justifying it. I suspect a large proportion of the photos have not previously been published, guaranteeing readers many hours of armchair enjoyment. A number of the photos are real gems that warrant detailed examination and are a joy to behold.

The range of images is excellent, covering all facets of timber harvesting operations with an emphasis towards tramway-related photos. The fascinating drawings will be greatly appreciated by all, including modellers. Most of these are from the Russell Allport archives – one hopes there will be more to come in future volumes. Their reproduction clarity is generally good but not all have a useable scale. Fullest congratulation to the authors for uncovering and sharing this 'missing' source.

However, there are a few matters that I hope the authors will address in forthcoming volumes. I sometimes found the grammar disconcerting, having to re-read some sentences and mentally insert a few commas, occasional hyphens, and possessive apostrophes. This tended to make the reading somewhat stop-start and broke one's concentration. Hopefully an exacting proof-read of forthcoming manuscripts will rectify future volumes. Such processes would have also identified some of the overly complicated sentences and distilled them to simplicity. Apart from grammar and punctuation, there are also a worrying number of spelling mistakes, factual errors, and some confusing terminology that have unfortunately detracted from the final product. These should have been identified and corrected during intensive and robust editing and proof reading. Such a seminal work as this deserves nothing less. It would be a nice touch if the authors prepared an addenda in due course for all purchasers.

These grumbles and problems aside, this is a most impressive tome, with a well thought-out logical sequence of chapters and more information than I have ever seen on many aspects of logging. The presentation and layout is very good, and the front cover is a delight. It is lavishly presented, in a large format (though A4 would have sufficed) and printed on a quality paper.

If Tasmanian logging and tramways are one of your interests, this book is a must. Mine is sure to get lots of use so I bought the hard cover version – hang the expense! All profits are going to help children with cancer – The Kids' Cancer Project. The print run is very limited (500), so if you haven't got a copy yet and desire same, wait not a second longer! Recommended. *Phil Rickard*



The South East Queensland Group of the Society conducts the annual Mike Loveday photo competition for the best photo of light railway interest. The 2017 winner is this magnificent photo of the Bundy Fowler crossing Constant Creek in the Mackay area of North Queensland. The photo was taken by Bob Gough. Congratulations Bob – it is a great photo.



Field Reports

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

Planet Mills, Mount Disappointment, Victoria Gauge 1067mm

This site report forms part of the LRRSA post-2009 fire survey. In 1894 the Australian Seasoned Timber Company Limited erected a steam-powered sawmill near the junction of Sunday and Westcott Creeks at Mount Disappointment. This, the Planet Mill (which operated in conjunction with the Company's main Comet Mill) worked until its log supply was exhausted, whereupon it was relocated to a second site further east and operated there until 1901. As the first Planet Mill site was submerged by the construction of the Sunday Creek Reservoir in the 1980s, site investigation was restricted to two tramways that supplied logs to the mill from the south and east.

The south log tramway was inspected on 16 and 30 November 2009 and ran along the banks of Sunday Creek and Hazel Creek for a distance of about 2 km. The portion examined was that south of Westcott Creek Road. The tramway appears to have been constructed mainly of wooden rail with some iron strap-rail and conventional iron rail in places. As this tramway is close to the stream which forms part of the Broadford water supply, it is relatively undisturbed. The line crosses from one side of the creek to the other on low bridges and makeups as required by the topography. Some of these bridges have remnant timbers, although in poor condition. The south side of the second bridge south of Westcott Creek Road (MGA 0334100 / 5861742) seems to have been on a tight curve, as a quantity of strap-rail remains here. There is some evidence (formation with sleepers and dogspikes near the north abutment) to suggest that this bridge may have been realigned. Some sections of the formation close to the creek are rock lined and have rock packing of the sleepers. A landing is located on a siding (or early terminus) west of the line at MGA 0334100 / 5861540, and others occur at intervals along the length of the line.

Sections of strap-rail remain at various locations. Strap-rail and, as evidenced by remaining dogspikes, conventional iron rail, seem to have been used at 'difficult' locations such as bridges and sharp curves. Several lengths of strap-rail remain roughly in position on the westernmost rail of the line approaching and onto the Sunday

Creek bridge near its junction with Hazel Creek. This rail still contains the countersunk spikes used to fix it to the underlying wooden rail. In the Hazel Creek valley the tramway crosses to the west side of the stream at an acute angle then climbs the side of the valley to gain height to surmount a small waterfall. A side cut of approximately 2 m height is used here. At the falls the tramway runs along the line of the creek but does not cross, using the lip of the falls as a base for a bridge bed-log. This log remains approximately in position. A bridge timber containing long spikes was located in the creek immediately upstream of the falls. Beyond the falls the tramway regains the west bank, curves sharply through the base of a gully (where a piece of strap-rail was located) and appears to terminate at MGA 0334298 / 5860640. A landing was probably located here on the west side of the line.

The east log tramway, inspected on 13 December 2009, branched from the Comet Mill outlet tramway immediately on the east side of the Little Westcott Creek road bridge and ran along the south side of Westcott Creek in an easterly

direction. The formation is very well graded and has, in part, been reused as a bulldozed track (between MGA 0335329 / 5863021 and 0335903 / 5863135). Remaining features suggest this line was iron-railed. At MGA 0335960 / 5863141 a short section of approximately 20 kg/m rail was noted. At MGA 0335903 / 5863135 a formation was noted running downhill to the west-northwest, but could not be confirmed as being tramway related.

The tramway, having maintained a relatively level route, meets Westcott Creek at MGA 0335960 / 5863141. On the approach to this bridge there is evidence of timber revetment on the north side of the line and a long (> 7.6 m) length of iron rail, weighing approximately 25 kg/m, lies beside the line here. Bridge remains indicate that the tramway crossed Westcott Creek to the base of a ridgeline on the north side of the creek: no evidence of it continuing further was discovered. It probable that logs were snigged from the northern slopes of the Westcott Creek valley to this point. It is conjectured that this route may have been used for transporting items of heavy equipment to





Tramway remnants on the Planet Mill's southern log line along Sunday Creek: strap rail, bridge cross-log and longitudinal bearer. The remains have been highlighted in this digitally-modified image. Photo: Colin Harvey



Bridge bearer complete with iron spikes on Hazel Creek (a tributary of Sunday Creek) at the extreme south end of the Planet Mill's southern log tramway. Photo: Colin Harvey



Phil Rickard captures an image of the 'DI Co LM' iron rail near the second Planet Mill site. The rail is not in its original position, probably having been bulldozed here when Watering Creek Road was built. Photo: Colin Harvey

and from Comet Mill, avoiding the extremely steep sections of the latter mill's outlet tramway on the Harrys Nose spur.

The second mill site was east of the first in the headwaters of Little Westcott Creek. Although no contemporary documentary evidence has been located to confirm this as a sawmill site, archaeological evidence appears conclusive. An area approximately 9 m by 10 m aligned north-west to south-east on the north side of the ridge is built up as an earth platform. This platform contains the remains of partly buried bed logs arranged in a grid pattern. The bed logs in the north east corner of the platform have substantial bolts, presumably for machinery mounting (MGA 0335975/5862719). There are remnants of a trench or borrow pit on the south east side of the platform debouching north easterly, but this has been partly obscured by road works. Part of a small tram wheel (consistent with a bench trolley) was found on the platform.

On the hillside to the east across Watering Creek Road is a section of approximately 20 kg/m iron rail marked 'DI Co LM' [Dowlais Iron Company, Wales?]. Some snig tracks run down the hill in this area. On the slope north of the site there is evidence of habitation in the form of crockery and glass shards. At MGA 0335959/5862755 a pile of rock may be associated with a fireplace. A large fire-bar and part of a small tram wheel where also found here. A tramway runs east-south-east from a point on the top of the ridge, commencing in a shallow cutting at MGA 0335944/5862739, into the headwaters of the Little Westcott Creek. On the south side of the tramway is a rectangular depression which might be the remains of a horse trough. To the north west of the tramway several large cast iron bearings, probably from log jinkers, were found. The area between the tramway terminus and the machinery site has been disturbed, including some very recent disturbance by road maintenance machinery.

This tramway started (or ended) at the machinery site described above (MGA 0335944/5862739) and ran on an almost level course south along the contour into the Little Westcott Creek valley. The presence of dogspikes and lack of wooden rail pins or nails suggests that the northern portion, at least, was iron railed. The tramway crossed one branch of the creek on a bridge about 30 metres long and, after another short section of contour, another creek branch, and part of the hillside, was crossed by a bridge almost 100 m long. Little evidence of bed logs was located here, although many spikes and other bridge hardware were present. It is possible this bridge was partly supported by crib work.

Immediately south of the longer bridge the tramway appears to enter a very short dead-end set into the slope of the hill (MGA 0336024/5862540). This area is about 5 m long and 3.5 m wide, surrounded to the east, south and west by spiked-down logs. Within this defined area, sleepers containing the iron pins used to fasten the rails remain in place. It is clear that there were two tracks here, and the diverging alignment of the remaining spikes/pins suggests some sort of pointwork. A pulley-block with hook was located immediately (within one metre) west of the points and a small section of iron strap rail nearby.

From the dead-end, a branch tram seems to have run on bridgework a short distance to the north-north-east to terminate at MGA 0336013/5862308. This probably served a log landing on the west side of the line, as two steep snig tracks descend from opposite directions to a point about 10 metres west of the tram terminus. A bar chain (as used in harnessing bullocks to logs) was located near here. The snig track running north is unusually well defined and shows evidence of having been deliberately constructed to handle logs across the slope of the hillside.

Colin Harvey and Phil Rickard, 02/2019



The Buyers locomotive and its successors (LR258)

I was much impressed with Mark and Angela Fry's article on the various locomotives used over the years at Raminea mill, in southern Tasmania. May I add some background details regarding A B Buyers and correct the statement that Buyers sold his business to Johnson and Wells?

As mentioned, Buyers emigrated from Scotland in 1888, aged 35. Departing London on 20 January on the *ss Iberia*, Andrew, and his wife of three years, Mary (ten years his junior) arrived in Melbourne on 1 March. In early 1890, due to the deepening economic depression in Victoria, the couple moved to Hobart and in March Buyers purchased the existing engineering and iron foundry business of William Pitfield (previously Gellie and Pitfield) in Montpelier Street.

Buyers quickly established a name for himself as a conscientious and innovative engineer. His first railway foray was in 1891 when he constructed a 3ft 6in-gauge 20-seat passenger vehicle for Grubb's Silver Mining Co at Zeehan.¹ In 1899 a log-hauling winch was manufactured for Henry Chesterman's Raminea mill² – not H. Chesterman & Co as often stated, as that firm didn't come into existence until after Henry's retirement at the end of 1900.³

By 1911 a locomotive was under construction; it was delivered in March 1912 and was working a couple of months later.⁴ Just two years later the Buyers locomotive had a narrow escape from destruction when in late October 1914 a bushfire swept through Raminea, destroying everything except Frank Chesterman's house, a couple of cottages and the engine shed which had the Buyers inside.⁵

In 1898 his engineering expertise was sought when he was called as an expert witness in a court case for compensation when Ernest Boon's arm was severed in Bond's bark mill. Buyers, and several others, considered the machinery dangerous.⁶ One of Buyers' specialties was steam winches and winding engines and many were employed all over Australia in the shipping and mining industries so one could not doubt he knew about limbs being caught in machinery.⁷

Both Andrew and Mary, as might be expected, initially attended St John's Presbyterian church in Macquarie St, Hobart. By 1899 Mary was honorary secretary and treasurer whilst Andrew was the church clerk. Yet, some years later, the couple switched to the Church of England, attending St George's church, Battery Point. Andrew was soon on the church council. Mary was involved in a number of charities in addition to church ones, including the Children's Hospital Fund. Mary also had a bent for politics – by 1914 she was treasurer for the East Hobart and Battery Point Tasmanian Liberal League, and during the war in various patriotic funds.

In 1910 Buyers announced he intended to manufacture marine oil engines and alterations were duly made to his Montpelier Road plant to accommodate this. In 1915 the first such engine, a 2-cylinder, 4-cycle marine engine was manufactured.⁸ In addition to these newer products Buyers continued to turn out his 'bread and butter' items such as boilers, engines, pulleys, saw spindles, log shoes, pumps, etc., and also undertake manufacturing and repairing countless items – from slipways to drain gratings to complete sawmill plants.

By 1922, Buyers was seventy years of age and started negotiations to sell the business. The exact date of handover is unclear (either 1922 or 23 seems likely) to a partnership composed of Herbert Montague Saunders and Victor Augustus Ward. Trading as Saunders and Ward, they purchased the business but not the premises or machinery.⁹ Andrew Baxter Buyers died on 25 Feb 1925, aged 73, and Mary inherited his considerable estate, including the Montpelier Road property and the rents therefrom and their home, Kioto, in Hampden Road, Battery Point.¹⁰ In his later years Buyers had been much involved with the Hobart Bowling Club. The couple had no children.

Meanwhile back at the foundry, Ward left the partnership in July 1929 though the business continuing to trade as "Saunders and Ward". Mary Farquharson Buyers died 8 Sept 1937, aged 76, and the premises, plant and machinery was auctioned on 31 Jan 1938 subject to Saunders and Ward's tenancy being valid to 30 June 1938.¹¹ Result of auction not known. As Saunders and Ward continued to occupy the premises they may have purchased it or continued to lease it from the new landlord. The business still trades today, as Saunders & Ward Pty Ltd, run by grandsons of Herbert Saunders.¹²

Phil Rickard Ringwood,Vic

References

- 1. Light Railways 189; Mercury 10 Oct 1891; Tasmanian News 13 Oct 1891
- 2. Mercury 20 Jun 1899
- 3. Mercury 9 Jan 1901
- 4. Huon Times 20 Mch 1912; Mercury 25 May 1912
- 5. Daily Post 30 Oct 1914
- 6. Mercury 20 Apl 1898
 7. Mercury 3 Aug 1910
- 8. Mercury 10 Nov 1915
- 9. Mercury 26 Feb 1925
- 10. Tasmanian Wills No.4196, 1925
- 11. Mercury 15 Jan 1938
- 12. www.saunward.com.au/

Henderson Naval Base (LR 257)

I was interested to see the photograph of the Henderson Naval Base rock truck in the letters section of *Light Railways* 257. This has more modern axleboxes and wheels and standard railway drawgear, but otherwise appears identical to the stone wagons built in 1885–86 for the Westport Harbour Board in New Zealand, to the design of their then engineer Charles Napier Bell.

The Westport board sold 27 tip trucks of unspecified type (they also had four-wheel and unsprung trucks) to WA in 1892 (and two to Tasmania). CY O'Connor was also closely involved with the board before his move to WA (the board had wanted to employ him as their engineer in 1884, but he hadn't been prepared to leave the NZ Public Works Department). The Westport board was also happy to supply copies of Napier Bell's (he didn't apostrophise his name) drawings to other boards near-identical copies of their trucks were also built from sets of drawings they supplied to the Timaru (NZ) harbour board. Napier Bell had moved to Hobart - where he died in 1906 – by 1891, but continued to return to New Zealand for various projects until at least 1900.

Full details, drawings and photographs of these wagons can be found in the September 2017 NZ Model Railway Journal, available from http://nzmrg.co.nz.

I have attached a scan of a portion of a copy of the Westport Harbour Board drawing which was lodged with the NZ Public Works Department head office in 1887 and is now held by Archives New Zealand.

Kevin Crosado De Selby Research via email



A portion of a copy of the Westport Harbour Board drawing lodged with the NZ PublicWorks Department head office in 1887 showing details of the wagon designed by Charles Napier Bell.



Heritage & Tourist

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

AMUSEMENT RAILWAYS

The book Amusement Railways of Australia was published in 2015 by Transit Australia Publishing. Since then a couple of additional lines have been discovered, more information has come to light, and more photos have become available. The author, Jim Longworth, is preparing an addendum for electronic publication. Should any readers wish to nominate any lines that were originally omitted, offer additional information or photographs, they should contact Jim via the LR Editor at editor@Irrsa.org.au Jim Longworth

QUEENSLAND

FRIENDS OF ARCHER PARK STATION AND STEAM TRAM MUSEUM INC., Rockhampton 1067 mm gauge

The Friends Group has found that establishing a Facebook Page has increased Museum visitors from 39 in December 2016 to 214 for December 2017. It may also be due to an increase in visitor numbers to the region but the Group has received a lot of feedback suggesting that people heard about it on Facebook. This is a lesson that those railways that have not yet adapted to modern communications technology could well heed.

The Purrey Steam Tram had had its annual maintenance completed, followed by the boiler inspection. One problem has been found; the main steam pipe under the floor coming from the regulator going to the steam chest had rotted out and has to be replaced. Because suitable steam pipe could not be found in Rockhampton, it had to be sourced from Brisbane or interstate. When it arrived it had to be turned and welded into shape. The Friends Group completed this in time to have it running again by 2 February.

Tram Tracks Volume 12 Number 1, February 2018; Archer Park Rail Museum Approved Facebook page

DURUNDUR RAILWAY, Woodford

610 mm gauge

After two and a half years work, in late 2017 the Railway received the final building certification for its new loco storage shed. Upgrading and realigning of the trackwork leading to the new shed has also now been completed and signed off. This has meant that workers can finally start using it. *Melbourne's* [Hudswell Clarke 0-6-0 B/No.1701 of 1938] frame and tender were the first to be placed in the shed, with *Bundy's* [Bundaberg Foundry 0-6-2T B/No.5 of 1952] frame and the Baguley [0-6-0DM B/No.3377 of 1953] now also placed in the shed out of the weather.

Coinciding with completion of the new shed, another significant milestone was reached in December. After just over three years, the Perry [0-4-2T of 1949] was lowered back onto its wheels and moved to the new shed. While there is still a lot of work to do, this loco can now be moved around as required to complete the remaining work. Moving the Perry has meant other projects which have been on hold, can now access the workshop. The first of these is the ballast wagon with work already well underway.

With the trackwork for the locomotive storage shed completed, there was a return to main line maintenance during November and December. Work concentrated in Freeman's Cutting with replacement of timber sleepers with Isis Mill concrete sleepers and lifting and packing a 20 metre long section. Sleeper renewals were undertaken on



Bunyip, a 2 ft gauge 0-6-0WT locomotive of unknown German make, on display at Gin Gin, Queensland, 22 February 2018. In Light Railways No.181 John Browning explored the origins of this locomotive, which arrived in Queensland in 1896. Photo: Christian Iddon

the approach to Storybrook Station using ex-Ingham sleepers with bolted sleeper plates. There will be a concentrated push on main line maintenance over the next few months before returning to the bypass track at the locomotive storage shed. Future track days will concentrate on renewing defective timber mainline sleepers in steel or concrete.

2017 has been an excellent year operations wise, with just over 3000 passengers carried. This is a 28% increase on last year and a figure not obtained since the suspension of steam operation. This is despite having only one special run compared to four last year and the fact that running diesels does result in a drop in patronage.

Durundur Railway Bulletin Volume 39 Number 349 January/February 2018; http://www.angrms. org.au/collection.html

ATHERTON-HERBERTON HISTORIC RAILWAY INC. Herberton

1067 mm gauge

The Railway now has maintenance vehicles spread along the length of the track making it possible to keep the vegetation cleared and fire breaks maintained, as well as making it easy to keep these sections of track in gauge, ensuring that trains can traverse all parts safely.

Workers have also now finished replacing bridge 11 with steel culverts, with work on bridge 12 due to commence shortly. Workers are planning to remove all bridges between Platypus Park Station and Wongabel that will leave only four bridges between Moomin and Herberton. These will eventually have the timber structures replaced with steel.



Illawarra Light Railway Museum Society's 2ft gauge Perry 0-6-2T 3 TULLY 6 (7967.49.1 of 1949) hauls a variety of passenger stock at Albion Park on 12 August 2012. Photo: John Browning



Baldwin 0-4-2T 1 FAIRYMEAD (10533 of 1889) at the 2ft gauge Lake Macquarie Light Rail, Toronto, on 27 April 2008. Much-rebuilt Malcolm Moore 4wPM TWIGGY and North Eton Mill's No.7 0-6-2T Perry look on from inside the shed. Photo: John Browning

It is also planned to operate a small train ride between Platypus Park Station and Hastie Road this year with a new carriage presently being built at the Herberton workshops. This timber carriage is progressing well, along with loco 1069. The carriage has a beautiful bright white ceiling and one side has most of its lower cladding. Steps on both ends make for easier access and it is easy now to see what it will look like when it is finished.

The Railway still needs to raise \$145,000 to restore the Peckett locomotives and a variety of fundraising events for this purpose continues. *AHHR Newsletter* Issue 6 January 2018

NEW SOUTH WALES

RICHMOND VALE RAILWAY MUSEUM, Richmond Vale

1435 mm gauge

The museum has announced that it will be re-opening to the public on Sunday 4 March, after being closed since the devastating bushfire of September last year. Although a major bridge repair still needs to be completed, trains will be running on the 1.3 km Mukbring Road branch. The museum will be open on the first three Sundays of the month.

Richmond Vale Railway Museum Facebook Page

VICTORIA

ALEXANDRA TIMBER TRAMWAY AND MUSEUM, Alexandra

610 mm gauge

On the weekend of 13 and 14 January a team of volunteers put in a mammoth effort to complete an important element of the railway's turning triangle. This new section of track closely follows the alignment of the northernmost portion of the track of the Rubicon Lumber and Tramway Company. Backhoes were used to excavate a curve through the goods shed access track. Despite some troublesome rain, the work was largely completed on the Saturday, with only backfilling to be completed on the Sunday. This track just now needs to be connected at both ends (the points are already inserted) and workers will be able to turn locomotives without using a crane.

Timberline 159 February 2018

BELLARINE PENINSULA RAILWAY, Queenscliff

1067 mm gauge

The Q Train

Walkers BB DH locomotive, ex Emu Bay Railway No.1107, is now on a truck en route from Cairns to Queenscliff. It has been privately purchased and will be used to haul the *Q Train* (https://www.theqtrain.com.au/).

A couple of years ago, two people who had worked with trains for the better part of 50 years, purchased several historic carriages from Queensland Rail. They sought the expertise of a hospitality expert, and the Q train team was born. They have spent the last year or so refurbishing the old carriages, and have transformed a part of the old *Sunlander* into a new boutique rail restaurant called The Q Train. As long-term homeowners on the Bellarine Peninsula, they had long dreamed of creating a Restaurant Train to showcase the beautiful Bellarine and Swan Bay scenery, whilst offering premium local food and beverages. The *Q Train* is the realisation of this. The *Q Train* departs mainly from the historic Drysdale Railway Station, just an easy 15 minute drive from Geelong, and will take customers to Queenscliff via Suma Park and then return to Drysdale, where they will alight approximately four hours later.

David Bromage January 2018; The Q Train website 22 January 2018

PUFFING BILLY RAILWAY, Belgrave

762 mm gauge

PBR has now taken delivery of all the components designed and manufactured in Switzerland for the conversion of 14A from coal to oil firing. Roger Waller arrived from the suppliers, DLM, in Switzerland at the end of January to supervise testing and training. Installation is basically complete and repainting of the affected areas finished. 14 A has been observed in the Belgrave yard and has undergone some light engine and load trials to Gembrook. Observers have noted the neat engineering done to complete the conversion and the quite different smell and sound of the converted locomotive. Opinion amongst drivers and firemen appears to be divided with some supporting the converted locomotive and others declaring that they will never drive it. The locomotive is expected to enter service as early as March. The purpose of the conversion is to enable steam hauled trains to run from Lakeside to Gembrook during periods of high fire risk.

During February many of the Belgrave - Lakeside "shuttle" trains were hauled by the Beyer-Garratt G42, this was to help cope with heavy traffic arising from Chinese New Year.

At the time of going to press no scheduled trains using the Climax locomotive in 2018 have been announced.

Monthly News and local observations, February 2018

WALHALLA GOLDFIELDS RAILWAY, Walhalla 762 mm gauge

The broad gauge Fairmont trolley retrieved from Wahgunyah, is to be restored as a four-rows-of -three-transverse-seats passenger trolley to be used between two of the motor trolleys. Machining work on the trolley axles to convert them to narrow gauge has commenced.

Dogspikes and Diesel, November/December 2017

TASMANIA

TASMANIAN TRANSPORT MUSEUM, Glenorchy

1067 and 610 mm gauges

Following the announcement last October that the Society would be granted a lease over 4.5 km of the Glenorchy to Chigwell rail corridor, a delegation from the committee managing this



Kerr Stuart 0-4-2T No.1 (742 of 1901) is turned at the Thurla terminus of the 2ft gauge Red Cliffs Historical Steam Railway on 6 July 2008. Photo: John Browning

project met with the local representative of the Office of National Rail Safety. He was most helpful and has drawn up an action plan that the Society needs to follow and complete before a formal application to vary its accreditation can be lodged.

As expected, the first major items are the road and pedestrian crossings. The Society has had to engage a consultant from Melbourne who has completed the on-site inspections and will now calculate the level of risk these crossings present. The Society then has to come up with a plan on how to manage those risks that may involve reinstatement of crossing lights and bells, traffic protection officers, or retaining existing infrastructure in the case of some pedestrian crossings. The bottom line is that the risk management of the crossings will take some time to resolve and a commencement date of operations is now more likely to be mid 2018 at best.

SOUTH AUSTRALIA

SOUTH AUSTRALIAN LIGHT RAILWAYS CENTRE, Milang

 $610\ \text{mm}$ and $1610\ \text{mm}$ gauges (and soon to be 1067 as well)

The starter motor of the Ruston locomotive is away being re-furbished, and wiring is in progress. The loco is to be repainted with lining and logo similar to the 1956 one at Don River.

The recent model railway show raised \$7000 for the Museum and, with a grant from Alexandrina Council, will fund doubling the size of the SA LR centre. This building extension has been approved and will be built by mid-March. The extension will have large doors facing the station platform across the broad gauge and 2 ft tracks (a third rail for 3 ft 6 in will be placed in the broad gauge track). These doors will have large signs on the inside announcing the SA LR centre, so that when open, the centre will be a lot more obvious to visitors. A ramp from the station platform to the centre will also make access much easier.

The re-furbished side-tip skip from Old Tailem Town (used on the flood levees in 1956) and swapped for a surplus luggage trolley, was on display in the LR centre.

Minutes of the LRRSA SA meetings, December 2017 and February 2018

OVERSEAS

KILLAMARSH, UK, Hunslet 4-6-0T locomotive 1215

The restoration team is now very close to final completion of the job. In the new year it is expected that the boiler will be removed from the frames for its hydraulic and steam tests. There are a few jobs to do first, for example completion of the cladding work and the blower pipe and so on, but these will happen and then workers will see smoke curling out of 1215's chimney for the first time in many years. Once the boiler gets through its exams, workers can put it back in the frames with the ash pan attached and then a rapid assembly will follow with parts that are now all made and have already been trial fitted. This has the benefit also of the team not losing more than a few weeks off the span of the ten-year boiler certificate that starts on the date of the hydraulic test.

A launch date has now been set for 21 April at the Statfold Barn Railway.

The restoration of 1215 has not been easy and it often felt as if the locomotive resisted every bit of the way, but the restoration team is about to win and there is no doubt that the locomotive will make a fine sight as it moves off in steam. 1215 will be in ex-works condition when finished and it is the team's hope that it then gives ten years of really good reliable performances on heritage lines and that it retains the WOW factor as the only member of that class of locomotive in steaming condition in the world.

Books from LRRSA Sales ...

Tall Timber & Tramlines Queensland



By John Kerr Published by the LRRSA.

Describes all Queensland timber tramways known to the author.

Soft cover, 104 pages, A4 size 90 photographs, 28 maps and

diagrams, References, bibliography, and index.

Price \$29.95 plus postage (\$22.46 to LRRSA members) Weight: 520 gm

300 pages, 279 x 215 mm, hard cover, many photographs.



A new history of the famous standard-gauge Wolgan Valley Railway, NSW. With five chain curves and 1 in 25 grades in spectacular scenery, it used four three-truck Shay locomotives. Includes some original handcoloured photographs, detailed maps, and rolling stock diagrams. **Price \$78.00 plus postage** (\$70.20 to LRRSA members)

Weight 1,400 g

Simsville and the Jarrah Mill

Myall River State Forest, New South Wales



By Ian McNeil Published by the LRRSA Soft cover, 96 pages, A4 size 55 photographs, 12 maps and diagrams, references, and index.

The history of a 3ft 6in gauge tramway and sawmilling operations at the village of Simsville, near Stroud. The tramway used three Climax geared locomotives. **Price \$29.00 plus postage** (\$21.75 to LRRSA members) Weight: 490 g



THE

The McIvor Timber & Firewood Company

Shale & Shays The Fight for Shale Oil from the Wolgan Valley

By Mark Langdon

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Tooborac, Victoria By Frank Stamford Published by the LRRSA Soft cover, 104 pages, A4 size 104 photographs, 23 maps and diagrams, references, and index.

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