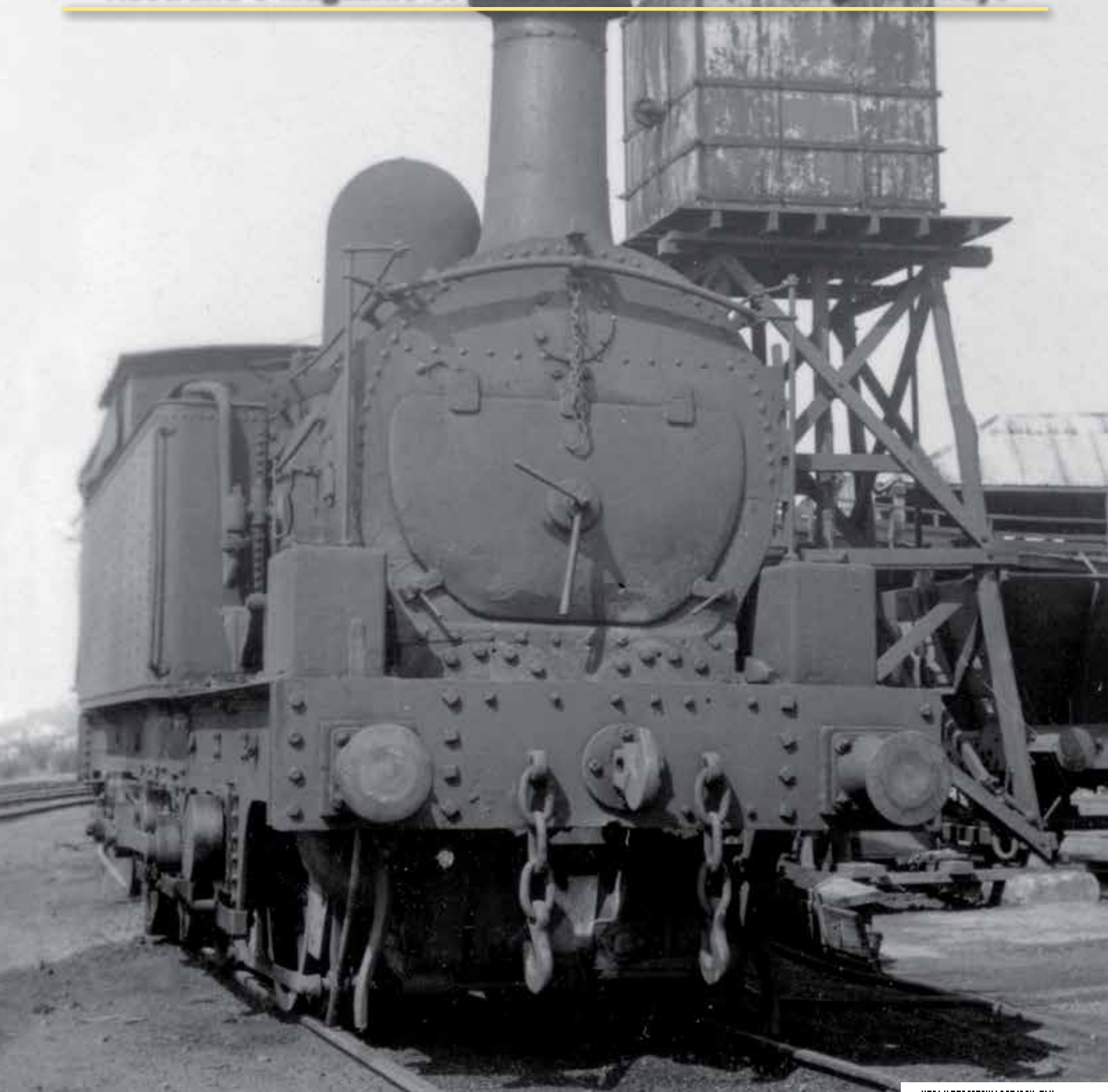


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Australia's Magazine of Industrial & Narrow Gauge Railways



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Imperial to metric conversions:

1 inch (in)	25.4 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metres
1 mile	1.61 kilometres
1 ton	1.01 tonnes
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts
1 gallon	4.546 litres
1 cubic yard	0.765 cubic metres
1 super foot (sawn timber)	0.00236 cubic metre

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Changing of the guard

The history of the Light Railway Research Society has seen many changes since the society was first formed fifty two years ago by a group of five school friends, growing to the organisation it is today with 673 members, and a readership of *Light Railways* of around eight hundred more.

While the society has always been keen to explore different paths to sustain and develop an interest in light railways, a key development that has driven this growth occurred 15 years ago when *Light Railways* 139 of February 1998 was published in the A4 format. Bob McKillop, John Browning & Bruce Belbin accepted the challenge to transform *Light Railways* and *Light Railway News* from the small format publications into the one magazine that we are all familiar with today. Bob had previously edited *Light Railways* for 12 years from 1980, while John had edited *Light Railway News* for 20, from 1977 – Bruce being the novice of the trio. At the time there was some consternation regarding the direction in which the society was heading, but the turnaround in membership and interest in the society has shown it was a great decision.

As all members and many readers will by now be aware, Bob stepped down last year, and Bruce has also decided to hang up his editorial hat later this year. While the society is sad to see these gentlemen who have contributed so much to the society step back, it also gives an opportunity for someone new to join the editorial team and help guide the magazine in the future. There will be some changes to the role, as Bruce was in the special position of being both editor, and graphic designer – skills the council acknowledge few will have. If anyone is interested in discussing the role and its possibilities – member or not – please contact either Frank Stamford at: frank.stamford@bigpond.com or telephone 03 5968 2484. Or Scott Gould at: fieldreports@lrrsa.org.au or 03 9391 5635. *Scott Gould*

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.

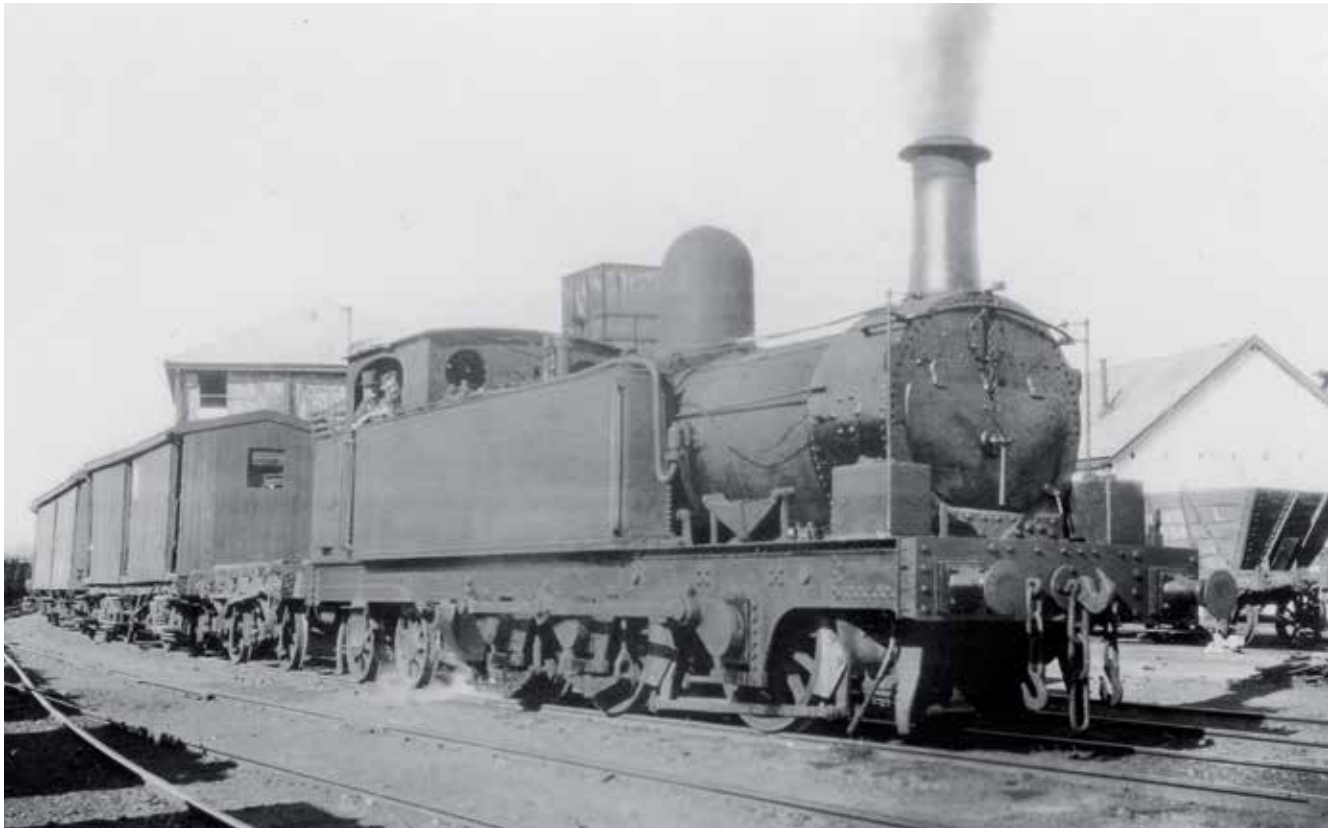
Members are actively involved in researching light railways in libraries and archives, interviewing knowledgeable first-hand participants and undertaking field work at industrial sites and in the forests.

Light Railways is the official publication of the Society. All articles and illustrations in this publication remain the copyright of the author and publisher. Material submitted is subject to editing, and publication is at the discretion of the Editor.

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

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

Front Cover: Like most of Australia at the time, J&A Brown's Beyer, Peacock 0-6-4T number 5, ex-Mersey Railway, Liverpool, was having a couple of days off as it rested beside the locomotive water tank at Abermain Colliery on Boxing Day 1938. Photo: RB McMillan, ARHSnsw Railway Resource Centre 016249



J&A Brown 0-6-4T number 5 (ex-Mersey Railway number 1 THE MAJOR, Beyer, Peacock 2601 of 1885) on a train of miners' carriages at Abermain Colliery circa 1938. Photo: Bart Wiles, EA Downs Collection, ARHSnsw Railway Resource Centre 033137

Two Number Fives: The story of ex-Mersey Railway locomotives **CECIL RAIKES** and **THE MAJOR**

by *Graham Black*

The Mersey Railway

In late 1899 a struggling railway company in England made a decision that was to affect the future of the Richmond Vale Railway (RVR) in NSW. That company was the Mersey Railway Company of Liverpool, England, and its decision was to consult with the British Westinghouse Electric and Manufacturing Company about electrifying its underground railway.

The 4½ mile long Mersey Railway in north-west England has an interesting history. The deep River Mersey separates the towns of Liverpool, on the east bank from Birkenhead on the west. Records exist that the Borough of Liverpool was chartered in 1207 by King John. The Birkenhead Priory was granted rights to operate a ferry between the two, then villages, in 1332. By the mid 1860s, the port of Liverpool was the second only to London in size but its export tonnage was 30 per cent higher. On the Birkenhead side was the livestock and general trade (sugar, tobacco and timber) and ship yards, while Liverpool handled the glamour of passengers and the lucrative cotton trade.

With the coming of the 'Railway Mania' other interested parties wanted to tap into the average 26 million passengers using the cross-Mersey steam ferries each year. Any bridge ideas were soon ruled out because of the height required for shipping, mostly sailing, to pass underneath, so a tunnel was proposed.

In 1866, one interesting idea was a pneumatic worked railway tunnel, but it quickly faded away due to lack of finance.

On 20 January 1886, the Mersey Railway was opened, at a cost of £386,000. It ran from James Street, Liverpool to Hamilton Square, Birkenhead, later extended to Birkenhead Park to create a junction with the Wirral Railway. An eastern extension from Green Lane to Rock Ferry linked up with the Chester & Birkenhead Joint Railway, owned by the London Northern Western and Great Western Railways, in 1891.

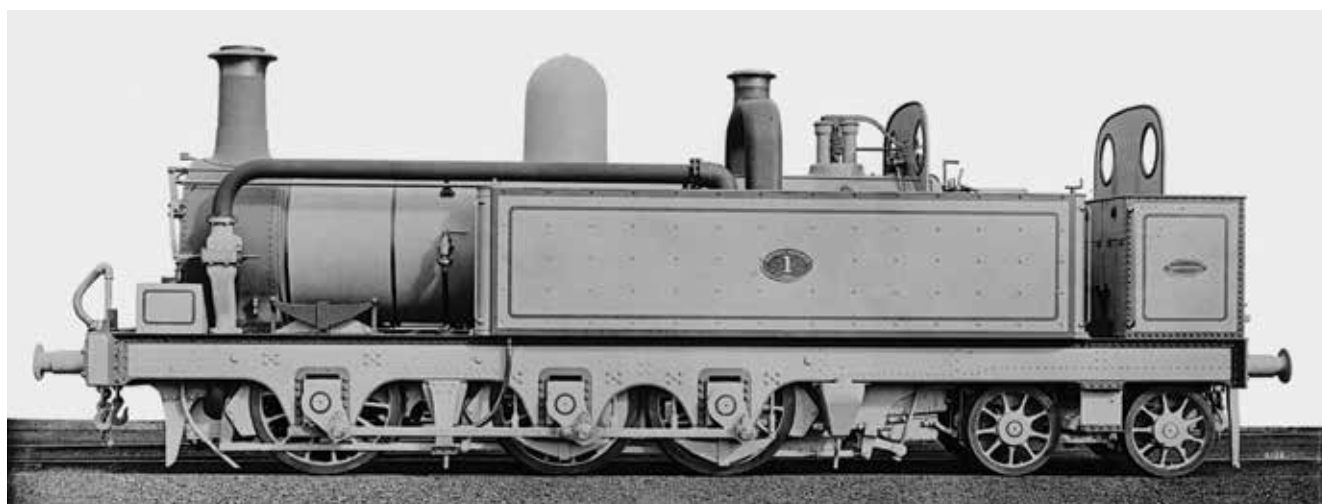
The Mersey Railway is neither straight nor level throughout its length. The 3 mile tunnel section slopes down a 1 in 30 grade on the Birkenhead side to a 1 in 27 rise on the Liverpool side. The bottom of the grade is directly under the Mersey River. Extremely powerful locomotives were required to work these grades and in 1885-6 Beyer Peacock and Company, Manchester, built a series of 0-6-4T locomotives fitted with condensing apparatus. Two series of 2-6-2T locomotives followed from 1887.

The 0-6-4T Mersey Tank engines

This article will concentrate on the 0-6-4T locomotives only. They were outside framed, with two inside cylinders measuring 21 inches by 23 inches, 4ft 7ins diameter wheels coupled together with outside rods, boiler pressure of 150psi, water capacity of 1,250 gallons and the engine weighed in at 67 tons 17cwt. No cabs were fitted, the foot-plate being completely uncovered as the majority of their work was in tunnels, although weather shields were positioned fore and aft. A very modern feature was a steam assisted power reverser. They were rated as the most powerful tank engines built to that time, capable of hauling 150 tons on the 1 in 27 grade. The condensing apparatus was designed to divert the exhaust into the side water tanks to alleviate pollution in the tunnels, but it was not totally effective.

MERSEY RAILWAY CLASS 1 0-6-4T LOCOMOTIVES BUILT BY BEYER, PEACOCK & CO LTD

No.	Name	B/No.	Built	Disposal
1	THE MAJOR	2601	1885	J&A Brown, Richmond Vale Railway, NSW
2	EARL OF CHESTER	2602	1885	Alexandra (Newport & South Wales) Docks & Railway Co
3	DUKE OF LANCASTER	2603	1885	Alexandra (Newport & South Wales) Docks & Railway Co
4	GLADSTONE	2604	1885	J&A Brown, Richmond Vale Railway, NSW
5	CECIL RAIKES	2605	1885	Shipley Collieries, Derbyshire
6	FOX	2606	1885	Alexandra (Newport & South Wales) Docks & Railway Co
7	LIVERPOOL	2607	1886	J&A Brown, Richmond Vale Railway, NSW
8	BIRKENHEAD	2608	1886	Shipley Collieries, Derbyshire
9	CONNAUGHT	2782	1886	J&A Brown, Richmond Vale Railway, NSW



Brand new Mersey Railway Number 1 THE MAJOR had not yet received its nameplates when it posed in 'works grey' at the Beyer, Peacock works at Manchester in 1885. Photo: Museum of Science and Industry, Manchester

Nine engines were built becoming Class 1 on the Mersey Railway. Their design is attributed to Hermann Lange, Beyer Peacock's chief draughtsman from 1865 to 1892. Lange had been responsible for the design of the famous 4-4-0 Metropolitan condensing tank locomotives (working on London's first underground railway) and later the NSWGR 4-4-0 C79/Z12 class, the 0-6-0 A93/Z19 class and the 4-6-0 P6/C32 class. *THE MAJOR* was named after the financier/contractor who built the Mersey Railway, Major Samuel Isaac.

Operations on the Mersey Railway

All the Mersey Railway's steam engines were well maintained and cared for and presented a splendid sight with their dark green boiler and tanks with brown wheels and frames. It was the age of spit and polish on Britain's railways.

The engine crews were busy men. Not only did they have to fire and drive, they had to uncouple and couple up to trains many times in the course of their shift. Fires had to be cleaned and coal taken on when required. In addition the condensing apparatus heated the water in the side tanks and these had to be emptied at Liverpool and re-filled with cold water after every round trip otherwise the steam would not condense and the injectors would overheat and not supply the boiler with water. (The later 2-6-2T engines were fitted from new with a crosshead-driven water pump.)

The discharge of hot water at the Liverpool side necessitated the additional installation of a 12-foot diameter fan, driven by a compound steam engine, which dispersed the clouds of steam and engine smoke. (The brick tower fan shaft is still in use today.) This operation was carried out away from the station and the main ventilation fans. When the engine was uncoupled, it ran towards the end of the tunnel to discharge

the hot water and re-fill the tanks and clean the fire. Its train was taken out by the previous engine, which was waiting in the engine loop, having been through the water changing and fire cleaning ritual. Once the operation was completed the engine would then move to the engine loop road to await the arrival of the next train. This process was repeated throughout the day with the engine only going to the engine shed, at Birkenhead, at the end of the day.

When the railway opened, no mechanically propelled vehicles had appeared on the streets of Liverpool and Birkenhead and most passengers would have arrived at the railway station mostly on foot or by omnibus or horse drawn trams but the wealthy would use horse carriages or hansom cabs. These picturesque vehicles would share the paved or cobble-stoned streets with all sorts of carts trundling slowly along behind plodding teams of horses. Liverpool was expanding at a faster rate, after its early years of squalor before the Great Reform Bill of 1832, than Birkenhead, so the Mersey Railway was the means to increase the commercial progress of both towns.

The scene at the railway stations was one of constant movement of people as they travelled to and from work, as well as for pleasure. To carry them, 97 four-wheel compartment carriages were in use, most with almost flat roofs. Eight carriages, loose-coupled together, made up a train comprising two first class, two second class and four third class vehicles. Most of them were of one particular class with sections for a guard and luggage. They were 27 feet long and 8 feet wide with a wheelbase of 15 foot 6 inches. Lighting was by gas, and vacuum brakes were used instead of the Westinghouse air brake system, most commonly used on intensive train services with closely spaced stations the world over. The riding qualities of the, short wheel-based, loose-coupled carriages was anything but



This engraving, from a contemporary issue of The Illustrated London News, shows a train on opening day, 20 January 1886, passing through the commodious double-track tunnel, which was reportedly constructed to a width of 26 feet and a height of 19 feet.

smooth, whilst packed compartments in rush hours must have been the ultimate in discomfort, but the journeys were short, 4½ minutes in the tunnel, so passengers did not spend more than a few minutes in transit, 'Free from Fogs, Gales and Tides' as one advertisement proclaimed.

The dress of the passengers would have posed a few problems on the crowded trains. Wealthy businessmen wearing coats with tails and top hats travelled first class, clerks wearing a suit and a bowler hat, possibly with an umbrella, travelled second class and labourers with work clothes and a cap travelled third class. Wealthy ladies in their flouncy skirts with floor length hemlines and bustles had quite a problem and acquired a skill in manoeuvring themselves into and out of the compartments. Rush hour periods would have been avoided by these ladies, due to the crush, especially when the dock and shipyard workers clambered onto the trains smoking their pipes.

Passengers descending in the huge hydraulic lifts inhaled the fumes of the engines as they emerged onto the murky platforms, a constant haze that the continuously revolving fans could not entirely clear, earning the railway the nickname of 'The Sewer'. As trains were frequent, nobody had long to wait, which was fortunate. The staff employed at the underground stations, James Street and Hamilton Square, were hardy types as hours were long on the railways, as they were in most other industries, and a long day inhaling smoke was not the most pleasant of occupations.

When trains drew into a station, passengers had to stand clear to avoid the dozens of out-swinging carriage doors and when halted made for the compartment appropriate to their class. Porters followed up slamming the doors shut, the 'Right of Way' was quickly given, and the train was soon on its way. Accelerating rapidly the exhaust blast was of such violence in the confined tunnels to rattle the carriage windows.

The engine crew were warned of the approach to a station by 'rail clangers', devices actuated by the wheels which sounded like exploding detonators. Upon hearing these, the more impatient passengers would leap to their feet, grab the door handle and swing the door open, even before the train stopped, after which they would leap from the compartment and make a rush for the lift.

When a train departed from a station on either side of the Mersey, the engine was driven flat out down the grade towards the centre of the river in order to gain as much momentum as possible to attack the upgrade on the other side. Even so, engines

were still working hard, belching smoke, as they entered the station. In the confined compartments of the four-wheeled stock the passenger sat, or in rush hour many stood, in the gaslight and inhaled the smoke and fumes that entered through the roof ventilators. Few people used the railway as a matter of choice. Those with time preferred the ferries except when the river was rough or fog stopped traffic.

The end of steam on the Mersey Railway

The expected 13 million passengers, as advertised in the prospectus, did not eventuate and the railway only carried just over 6 million the first year. The railway tried several improvements but passenger figures continued to fall each year, to 3.1 million in 1897. Financially the line was a failure and only electrification could save the Mersey Railway from total closure, but it lacked the ability to raise the funds.

The outlook for the railway was bleak and the financial position for investors became steadily worse. There was no hope of improvements with existing methods. Thus entered Mr George Westinghouse.

The British Westinghouse Electric and Manufacturing Company had George Westinghouse (inventor of the Westinghouse continuous air train brake) as its chairman. He had made another fortune from electric traction in America, and wanted to be in on the boom of electrifying English industries and railways so he had built a factory at Old Trafford, Manchester, and wanted a suitable showcase for his products.

To help the struggling Mersey Railway, the Westinghouse Company proposed to install all the equipment at its expense, taking payment in Mersey Railway shares. The agreement was signed in June 1901 and work was completed by May 1903, a remarkable achievement when considering that work on lineside equipment could only be carried out during four hours at night when all trains stopped running. Also a new power station was constructed at Birkenhead and 57 electric cars were built and the staff trained. Thus the Mersey Railway became the first steam operated railway in Britain to be converted to electric traction.

On Friday 26 June 1903 at 12 noon an auction was held at the Great Central sidings, Bidston, just west of Birkenhead Park Station. The auctioneer was George N Dixon of Hanover Street, Liverpool and all non-electrical stock was on offer. In the catalogue it stated that prospective buyers of locomotives would be able to view them in steam. The auction was not a success and it is believed that the majority of the stock was disposed of by direct sale. The last engine did not leave Bidston until 1906.

Between November 1903 and January 1905 the Alexandra Docks and Railway (Newport, Monmouthshire) purchased three Mersey 0-6-4T engines, numbers 2 *EARL OF CHESTER*, 3 *DUKE OF LANCASTER* and 6 *FOX*, with seven 2-6-2T engines. In January 1922 the Alexandra Docks and Railway, and these locomotives, were acquired by the Great Western Railway as part of the 'Big Four' grouping amalgamations. All were withdrawn between January 1923 and May 1932. In 1903, Shipley Collieries Ltd in Derbyshire purchased number 5 *CECIL RAIKES* and later came back for number 8 *BIRKENHEAD*.

The other four engines found employment on John Brown's Richmond Vale Railway in New South Wales. These were 1 *THE MAJOR*, 4 *GLADSTONE*, 7 *LIVERPOOL* and 9 *CONNAUGHT*, becoming J&A Brown's numbers 5, 8, 6 and 7 respectively.



The Richmond Vale Railway

In 1856 a railway line was laid from Minmi, near the Sugarloaf Range, across the Hexham swamp to the Hunter River. This line, just over 5½ miles long, was built for John Earles who opened a coal mine at Minmi. The coal was loaded into ships at Hexham, located on the Hunter six miles inland. These ships became known as the 'Sixty Milers'. (It is almost exactly sixty nautical miles from Nobbys, at the entrance to the Hunter River, to Sydney Heads). After floodwater had entered Earles' colliery in 1859, the workings were taken over by James and Alexander Brown who formed the J and A Brown Company.

In 1882 John Brown, eldest son of James Brown, was made Manager of the J&A Brown company and in 1900 he obtained the under-developed Stanford Merthyr No.2 colliery near Kurri and changed the name to Pelaw Main Colliery. The coal produced from this mine was railed to Hexham over the East Greta Coal Mining company's railway (later South Maitland Railway) to Maitland and then by the government railway to Hexham. This was totally against his inclinations and he proposed his own rail line, branching off his Minmi to Hexham railway, through the Sugarloaf Range to Pelaw Main. Work started in 1904 and the railway was opened to Pelaw Main Colliery on 26 June 1905.

From a junction, 3½ miles from Hexham on the original Hexham to Minmi railway, the railway passed through three tunnels, under the Sugarloaf Range, over Surveyor and Wallis Creeks on two large wooden trestle bridges, to Pelaw Main Colliery, 15½ miles from Hexham. At Pelaw Main, the main engine shed for the whole railway was constructed, all major repairs and overhauls being carried out first at Minmi before a new workshop was opened at Hexham alongside the ship loaders.

John Brown also owned the nearby Richmond Main Colliery, which he developed over twenty years to be the showpiece of his mining empire. To reach this site a connection, called Richmond Vale Junction, was constructed, 13½ miles from Hexham. Richmond Main Colliery was 15½ miles (24.8klms) from Hexham.

As part of developing his showpiece at Richmond Main, John Brown would not allow the building of a village or township to house the miners in the area. The closest settlements were Stanford Merthyr and Kurri Kurri so a miners' passenger

train had to be run at each change of shift to transport the men. These trains, travelling via Richmond Vale Junction, were reported to be open four wheel trucks fitted with rough wooden seats. (In the days before the advent of bath houses, if the men got wet travelling to work they were wet for the whole day). Because of several accidents and possible delays getting to and from work, a Direct Passenger Link (DPL) was constructed linking Pelaw Main and Richmond Main. Opened May 1922, the line was just over 2½ miles long.

The whole railway, to Pelaw Main and Richmond Main collieries, and the Hexham to Minmi Railway, was known as the Richmond Vale Railway (RVR). It was worked by two R&W Hawthorn 0-4-2T locomotives (947 and 948 of 1856), and two Kitson 0-6-0ST engines (2236 of 1878 and 1620 of 1870). New South Wales Government Railway 0-6-0 tender engines were often hired to ease the power shortage before the arrival of the Mersey tanks.

John Brown died on 5 March 1930 and his total control of the J&A Brown Company passed to Stephen Brown, his youngest and only surviving brother. This was not to last, for in January 1931, the Abermain Seaham Collieries Limited merged with the J&A Brown Company to form J&A Brown, Abermain Seaham Collieries Limited (JABAS). Soon after a link line was built between Pelaw Main Colliery and Weston station on the South Maitland Railway (SMR) line. This allowed coal from the JABAS mines near Cessnock to travel to Hexham over the Richmond Vale Railway.

This link line was also put to good use when floodwater covered and damaged the SMR line at East Greta Junction in July 1950, January 1951, August 1952, and February 1955. Each time floodwater halted traffic, most of the SMR 10-class engines were stranded at East Greta Junction, with 10-class engines out on the line being transferred to Pelaw Main running shed. These SMR engines and several JABAS engines worked coal trains direct from the Cessnock mines to Pelaw Main, before haulage to Hexham by JABAS engines. To help with the increased traffic, 50-class 2-8-0 engines were hired from the NSWGR to work from Pelaw Main to Hexham.

In May 1962, the amalgamation of several large mining companies with JABAS formed Coal and Allied Industries. Included in the amalgamation was the South Maitland Railway, originally the East Greta Coal Mining Company, and the Richmond Vale Railway.

The ex-Mersey Tanks on the RVR

Records are scarce on both sides of the world concerning the purchase of these, but it is believed they were obtained separately. The last purchased in 1908 (Mersey Railway number 1/RVR number 5) had been '*retained for three years as a ballast engine*'. When acquired they were sent to Beyer Peacock and Company for overhaul and dismantling for shipment. The overhaul included removing the condensing equipment and the vacuum brakes and the fitting of steam brakes and cabs. Instead of the bright and attractive colours of passenger working they were now painted in a plain drab black colour. Arriving in Newcastle, they were assembled at King's Wharf, the present day tug wharf, before being towed to Hexham, the first arriving in 1906.

As stated earlier, the railway had relied on 0-4-2T and 0-6-0ST engines, 28 feet long, weighing between 28 and 33 tons. Their haulage capacity was around 30 to 34 loaded wagons (around 200 tons) across the Hexham Swamp. The Mersey tanks by comparison must have appeared gigantic at 36 feet 6 inches long and weighing a massive 68 tons. As they entered service on the rough and tumble hard coal haulage work on the RVR, the four Mersey engines were first based at the Minmi loco shed but were transferred to the newly opened Pelaw Main loco shed soon after.

The steepest grades on their new home railway, 1 in 60, may have been easier, but now instead of vacuum-braked four-wheel passenger cars at a maximum of 150 tons over 4½ miles, the loads consisted of four-wheel coal wagons with no continuous brakes in trains weighing up to 400 tons or more running for 16 miles. These loads were double the weight of the trains hauled by Kitson engines 3 and 4, which had worked all the traffic from the opening of the line.

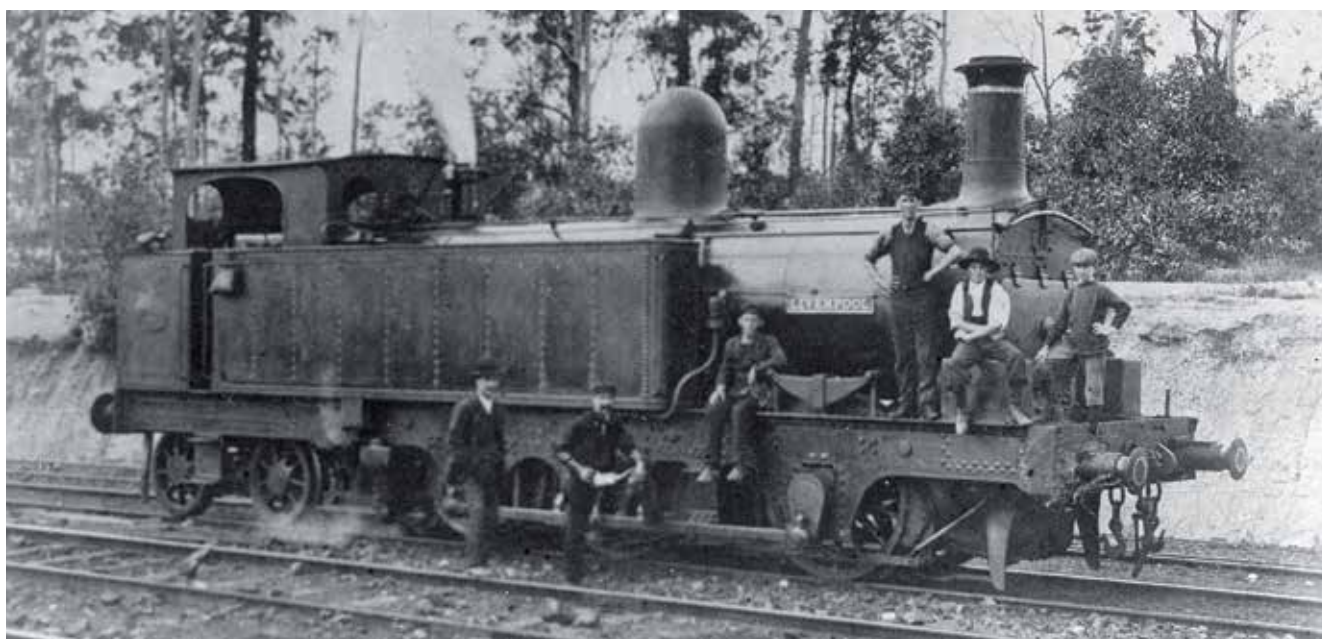
The increased haulage power meant that only one train was required each day from Pelaw Main to Hexham. Typically after collecting the loaded wagons in the yard, marshalled by one of the Hawthorn 0-4-2T engines, a Mersey tank would set off for Hexham. Leaving the yard on a falling grade, the train would branch right off the original line to East Greta Junction on to the Richmond Vale Railway itself. Then for a considerable distance the line is fairly flat and mostly straight through an '*open forest country of no particular beauty*' before a slight left hand curve to Richmond Vale Junction.

Here a track leading in on the right hand side came from Richmond Main Colliery. Passing the junction, the engine brakes were applied as the grade fell through a low cutting until reaching Wallis Creek. It is not clear, now, when guards vans were first introduced to help control the braking of a train. An inquiry into a fatal accident in November 1910 produced part of the instructions issued to drivers revealing that if no brake van was provided, the guard would ride on the locomotive. A bush or tree branch would be stuck in the load on the last wagon, in daylight, and a red lamp placed on top for any night running so they could be seen from the locomotive.

Releasing the brakes after crossing the high trestle bridge, the regulator was opened slowly to stretch out the train on a sweeping curve to the right then opened fully ready for the left hand curve, on a 1 in 70 grade, to No.3 tunnel. Passing through the 642 foot narrow bore, the line descended to the six span trestle bridge over Surveyor Creek.

An interesting shunt took place between No. 3 tunnel and the bridge. A loop road was laid on the right hand side where coal from several small mines was brought by road trucks and loaded into wagons. When a train for Hexham was to pick up the loaded wagons, the driver would shut off steam as the train started to roll out of the tunnel. The fireman would uncouple the engine from the train and apply several hand brakes on the train, and when he regained the footplate the driver would open the regulator and accelerate away. Nearing the Hexham end of the loop, the brakes would be applied again and the fireman would once again leave the footplate and, after the engine had passed, throw over the points and then release the brakes on the loaded wagons in the loop. These would then be allowed to roll out and on to the engine, and the driver would couple them on. Once the wagons were clear the points would be reset for the main line and the fireman would wait for the rest of the slowly descending train to buffer up. Releasing the hand brakes and with the coupling attached, the fireman would resume his duties on the footplate. This procedure, requiring great skill and judgement, would save time for the crew.

Just past Surveyor Creek a short high embankment enabled the train to gain some momentum before the climb to No.2 tunnel. A large deep cutting, known as 'Crazes' (named after the first ganger on the line) heralded the start of the next grade. It has



J&A Brown number 6 LIVERPOOL has a full head of steam as it poses with its crew and yard staff at Pelaw Main Colliery's full sidings, circa 1910.
Photo: AH Dunstan Collection, ARHSnsw Railway Resource Centre 008589

been reported that 65,000 cubic yards were removed to create this almost perpendicular sided setting which the exhaust from a hard working engine would reverberate off. Leaving the cutting behind, the line was straight for a while on an embankment, requiring 25,000 cubic yards from the previous cutting, before curving to the right in the next cutting.

After several cut and fill sections, the train entered a large 'S' bend to the original 'Six Mile Loop' located in a shallow cutting. This crossing loop, unprotected with throw over levers, was only long enough to handle the short trains hauled by the two Kitson 0-6-0ST engines so was of little use for the larger trains hauled by the Mersey tanks. In 1914, due to increased traffic during the First World War, this short loop was dismantled and relocated near to the entrance to No.2 tunnel. The new loop, 1075 feet long, could now hold a 40 wagon loaded coal train as another passed on the main line.

All steam engines on the railway worked bunker first with the loaded train, which was the opposite to the normal practice on other railways. The reason for this was that the top of the grade was located just east of the Hexham side of the 296ft long tunnel and the almost sliding fit of the Mersey tanks running smokebox forward would have almost suffocated the crews. Steaming bunker first, the exhaust would be clear of the crew but, with the introduction of brake vans, the guard would travel with the engine crew instead of enduring the smoke and steam that would linger for up to 15 minutes on damp days with no wind.

As the grade started to fall and the driver applied the brake the fireman, on the ground, would apply as many hand brakes as the driver required to control the train. (In the next 3½ miles the line dropped 1,300 feet on a 1 in 60 grade.) With the fireman back on board, now possibly taking it easy with a cup of tea, the driver used the brake as the train entered No.1 tunnel which had a left hand curve just before the exit.

At 535ft long, this tunnel presented problems when the NSWGR 50-class 2-8-0 engines were hired during the 1950s floods. Travelling smokebox first up the grade, the empty load kept the engine cab from hitting the wall of the tunnel. Returning tender first with the brakes applied, the weight of the train pushing round the curve forced the rear of the engine to swing out and the cab scraped along the outer wall. (These marks can still be seen today.) To overcome this problem, extra hand brakes were applied and the engines allowed to coast through, providing just enough clearance for the cab.



R&W Hawthorn 0-4-2T Number 2 simmers in the yard at Pelaw Main, in 1910. Locomotives 1 and 2 came to J&A Brown with the purchase of Minmi Colliery, coke works, loading staiths and the associated railway from John Eales in 1859. Photo: CC Singleton Collection, ARHSnsw Railway Resource Centre 004875



Locomotives 3 and 4 were very similar Kitson-built 0-6-0ST machines. Number 3 is at the head of a loaded train at Minmi on 23 February 1927. Photo: RN Smith, ARHSnsw Railway Resource Centre 008628

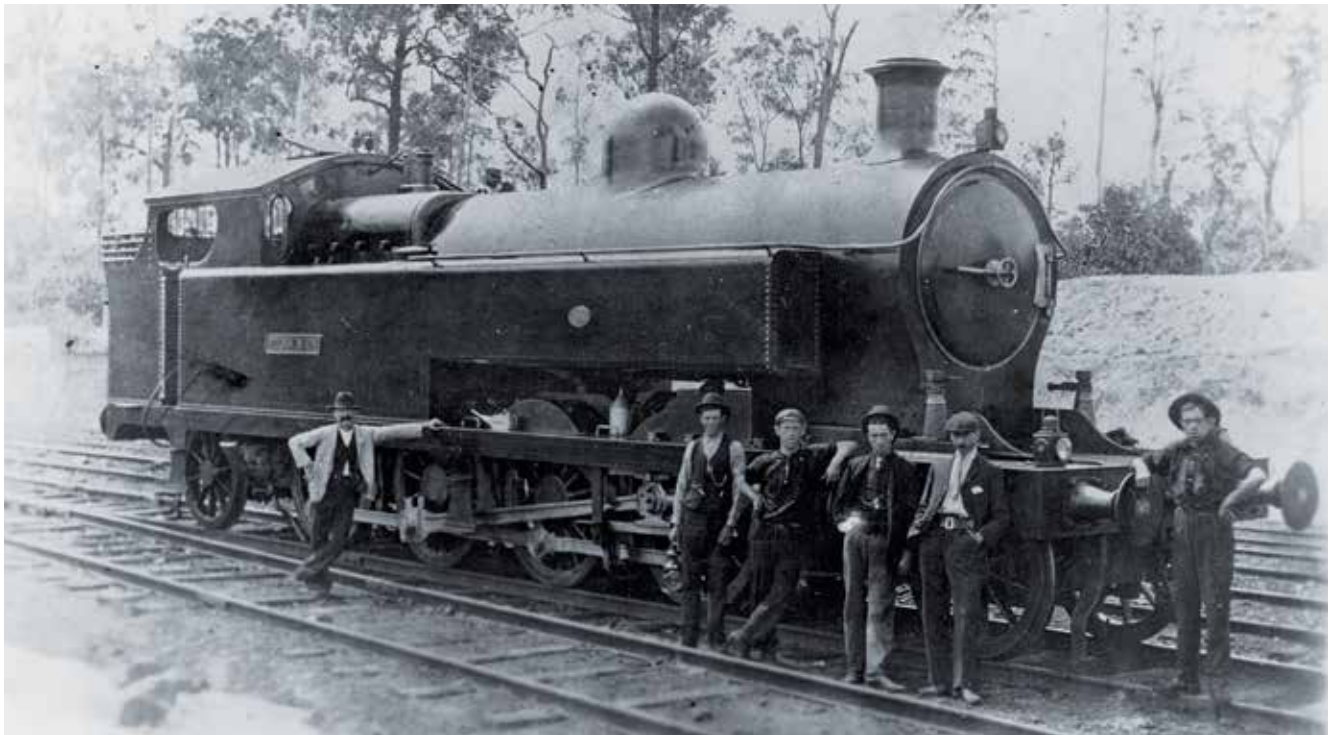
The exit of the tunnel was through a large rock cutting before another long high embankment signalled the last of the heavy earthworks required to build the line. As the valley widened out the line still dropped on a continuous grade past the future site of the Stockrington Collieries, the first opening in 1923.

Finally the train was stopped and all brakes released before an 'S' curve in a cutting, as the line was almost down to the level of the Hexham Swamp. The fireman would have picked up the shovel and started to feed the firebox as there was one more climb to negotiate. Half way across the straight flat section, the driver would open the regulator slightly and when he felt the train was stretched out would open it more to gain speed for the short climb up 'Blanch's Hill'. Swinging slightly to the right and blasting under an overhead bridge, the grade and load started to bite as the line swung left with the exhaust slowing until, at a steady plod, the train breasted the grade.

Now great care was needed on the brakes as the line dropped, first on a straight then slightly to the right then left to Minmi Junction where the train would have to stop. Originally with only one train a day from Pelaw Main and several from the Minmi direction, no signalman or signalbox was located here. The safe working procedures were rather primitive with a notice board available for drivers to leave written notes to indicate to other drivers as to their train weight and approximate passing or arrival times. As traffic grew, the line to Hexham was double tracked in 1909. After agitation from the engine drivers, a 'staff and ticket' system was introduced in 1911 and a signal box was constructed to control all movements.

The driver, after looking at the notice board and finding no train in the section to Hexham, left a written message to all and sundry that his train was going to Hexham before he returned to the engine. Taking the brake off, the train quickly gathered speed as it swung left on to the 3 mile flat straight section to the exchange yard at Hexham. This section allowed the 4ft 7in driving wheels to run up to 25 to 30mph, the fastest on the whole journey, with the outside connecting rods whirling around.

At the end of the straight the train was slowed as a slight right hand curve led into the exchange sidings. Here possibly one of the Hawthorn 0-4-2T engines could be found pushing and pulling wagons across the main northern railway line to the wharves on the Hunter River. Leaving the loaded train, the crew would have a crib break before collecting a rake of empty wagons and heading off back to Pelaw Main.



J&A Brown number 9 PELAW MAIN, the first of the three well-regarded Kitson 2-8-2T locomotives, poses with its crew and yard staff at Pelaw Main Colliery's full sidings, circa 1910. Photo: CC Singleton Collection, ARHSnsw Railway Resource Centre 004875

But this was not to last. A major problem with the Mersey Tanks resulted from their excessive weight and the long wheel base between the trailing driving axle and the rear bogie centre, 11 foot 9 inches. In sidings and sometimes on the main line, these combined to cause many derailments. Also the engines may have been heavy on coal as several received larger bunkers. Bought cheaply, they were only a stop gap measure, as in 1908 number 9 *PELAW MAIN*, a new 2-8-2T engine designed and built by Kitson and Company, Leeds (4567 of 1908), arrived and its performance proved superior to the Mersey engines. Two more, 10 *RICHMOND MAIN* (4798 of 1911) and 11 *HEXHAM* (4834 of 1911), were purchased.

The Mersey engines were downgraded to working the relatively flat and straight Minmi to Hexham coal haulage and shunting work. Interestingly, J&A Brown ordered from Beyer Peacock two new fireboxes for 'Ex-Mersey Rly engines' in 1915. There are no records of these fireboxes being fitted to any of the Mersey tank engines.

THE MAJOR

A little information is known of *THE MAJOR*'s early years on the RVR.

In November 1910, it was involved in a fatal accident while hauling a loaded train. It had stopped just outside the eastern end of No.2 tunnel for the application of some wagon hand brakes. Behind it in the smoke filled tunnel sped a motor-powered vehicle which crashed into the last wagon still standing in the tunnel seriously injuring its driver and killing his passenger, the Manager of Pelaw Main Colliery.

In 1913 it is reported to have hauled the first load of coal from Richmond Main Colliery. Its first recorded Hexham Workshop report was 17 September 1925 'For overhaul'. On 13 October 1926 it was stopped with boiler problems. 'Front and side sheet plates badly buckled necessitating 374 wall stays renewing'. It left the Hexham workshops on November 30 1926. The entry in the engine's Fortnightly Report book, 'October 13, 1926. Stopped with boiler problems' is an understatement. The inner and outer fireboxes are held together with wall and crown stays

and 374 wall stays renewed would be between $\frac{1}{4}$ and $\frac{1}{3}$ of the total firebox wall stays on the engine. The boiler was possibly close to a total failure!

In November 1930 number 5 received a new crank axle. This seems to be another problem associated with the Mersey tanks as several others were supposedly reported to have broken the driving axle, either being stopped for good or receiving a new crank axle at the Hexham workshops.

28 October 1933 was its next overhaul and it returned to service on 6 March 1934, reportedly on passenger train work between Pelaw Main and Richmond Main collieries. As stated above, passenger trains were required at the change of shift at Richmond Main Colliery. Before then a passenger train was run, morning and afternoon, direct from Minmi to Richmond Main during the development stages, possibly using a spare Mersey tank on this roster.

What a change for *THE MAJOR*. From hauling passenger trains underground, it was now 'down under' once again hauling four wheel passenger trains up and down steep grades. In 1927 the mine employed over 1,400 men and boys, a thousand on day work alone. There were men for the power house, the boiler house, the winding room, the fan shafts, the lamp cabin, the pole (pit prop) yard, coal screens and workshops without the actual miners themselves. All had to travel by train.

The workers' train cars comprised four wheel frames with the lower body sides slanting out and the upper being vertical with crude centre mounted doors. They had no heating or lighting and many journeys, morning, afternoon or night shifts, were spent travelling in the cold and dark. The interior smelt of axle grease, dry rotting timber, creosote, orange peel, tobacco and spit. Hopefully a fast trip or a breeze would bring in the sweet smell of eucalyptus to clear the nasal passages. Any industrial action on the men's part at the mine meant a long walk home.

On 15 October 1936, number 5 was transferred to Abermain Colliery, possibly to replace several of the Abermain engines that went to Hexham Workshops for attention during its time there. It was used hauling coal from the three mines to the junction with the South Maitland Railway.

On 27 September 1939 it was returned to Pelaw Main loco shed in need of an overhaul which did not start until 11 November 1940. This may have been a bottom end overhaul as no entry can be found in the Hexham Locomotive boilermakers' repair book for work on the boiler. The Fortnightly Locomotive Report book states, 'At this overhaul the boiler pressure was reduced by 20psi'. Was this a leftover from the buckled firebox plates or just plain old age?

On 12 February 1941, number 5 was 'Handed to traffic department and run on Hexham-Stockrington run'. This was an 8 mile run from the three Stockrington Collieries across the Hexham swamp to the wharf at Hexham on the banks of the Hunter River. On 19 June 1942, it arrived at Hexham workshops. 'A crack found in steam chest on bridge between the two cylinders. Cylinders patched up and locomotive returned to traffic'.

The Fortnightly Locomotive Report book for number 5 states, 'July 28, 1942. Arrived works. Boiler shell leaking. Lagging stripped for inspection. Crack found in boiler on left-hand side of engine near dome. Owing to age of this boiler, this locomotive will be stored in Richmond Vale Hay Shed.' This was the last entry for number 5 in the book. *THE MAJOR* was now totally worn out and would steam no more.

The other Mersey tanks, 4, 7 and 9, did not last as long at work. Number 4 (RVR 8) was withdrawn in the 1930s Depression years and cut up at Pelaw Main Loco shed in 1968, the crank axle surviving and now on display at Richmond Main Colliery. Number 7 (RVR 6) was withdrawn in 1932, and purchased soon after by the Cessnock Colliery who renumbered it 1. It proved too rigid for the track there and was advertised for sale in 1934. With no takers, it was stored at Kalingo Colliery until cut up in the late 1950s. Number 9



Number 5 in the yard at Hexham in November 1973, shortly after its sale to the NSW Rail Transport Museum. Photo: Graham Black

(RVR 7) was withdrawn in the late 1920s, believed due to a broken axle. It was reported to be cut up in 1956.

After two decades of storage at first in the Hay Shed, near Richmond Vale Junction, and then in Pelaw Main loco shed, *THE MAJOR* was hauled to Hexham in 1967, from where, in 1973, it was purchased by the New South Wales Rail Transport Museum and later transferred to its site at Thirlmere.



Number 5 stored at the NSW Rail Transport Museum at Thirlmere in October 2012.

Photo: Graham Black



Former Mersey Railway number 5 CECIL RAIKES (Beyer, Peacock 2705 of 1885) on display outside the Museum of Liverpool Life, in September 1999. This museum closed in 2006 and number 5 is currently in store, not having been allocated a place in the new museum, The Museum of Liverpool, which opened in 2011. Photo: Graham Black

CECIL RAIKES

Only a little information survives of the history of number 5 CECIL RAIKES. (Cecil Raikes was the first chairman of the Mersey Railway). It was sold to the Shipley Collieries Ltd in 1903 for use at Coppice and Woodside Collieries, Derbyshire and number 8 BIRKENHEAD followed. An 8½ mile line joined the two collieries to the Great Northern Railway's Nottingham to Heanor branch line at Nutbrook Sidings. This line would have used four wheel drop sided wagons to carry the coal, once again being non-braked.

Number 8 was scrapped in 1925 but number 5 soldiered on alone. Possibly parts from 8 were retained, such as the wheels, boiler etc, to keep 5 in working order. The mines and the railway, now only 4 miles long, were taken over by the National Coal Board in January 1947, and CECIL RAIKES was given the NCB number 42. It was withdrawn from service in early 1954, being replaced by a Yorkshire Engine Company 0-6-0DE locomotive. It was due to be scrapped soon after but luck was on its side and the engine was reprieved. A group from the Rail Correspondence and Travel Society (RCTS) heard of its possible demise and organised a rail tour for late afternoon Friday 13 August that year. The tour was conducted after normal railway operations for the day had ceased, with RCTS enthusiasts travelling behind CECIL RAIKES in empty, hopefully clean, coal wagons around the surviving system. It may have been a 'Black Friday' but there is no doubt the tour was a success. More importantly it brought attention to the uncertain future of the engine.

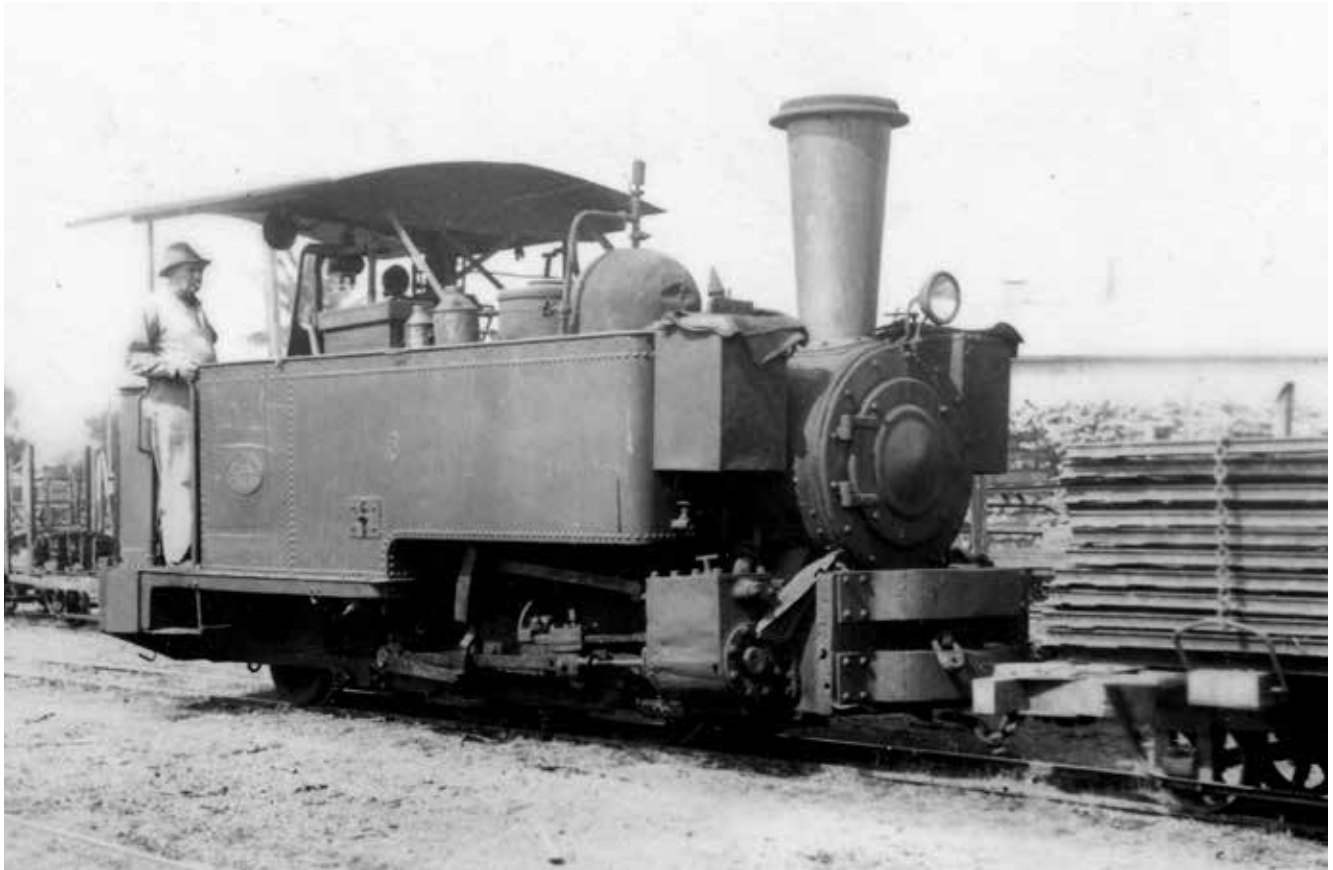
Because of its history, CECIL RAIKES was presented by the National Coal Board to the British Transport Commission and in 1956 it was moved to Derby Works for storage. It passed to Liverpool Corporation in 1965, first based at the Steamport

Transport Museum at Southport, then in mid-1995, over one hundred and ten years after it was built, CECIL RAIKES returned to the Liverpool Dock area at the Museum of Liverpool Life. The Museum of Liverpool Life closed in 2006. A new museum, The Museum of Liverpool, opened in 2011, but CECIL RAIKES did not feature on display. Part of the collection of National Museums Liverpool, it is currently in storage at Boole.

The two number 5 engines had almost parallel lives after leaving the Mersey underground railway except for being half a world apart. Both were purchased by coal companies, both hauled only four wheel un-braked wagons and both survived, thankfully, due to the keen interest of steam enthusiasts.

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- Personal conversions with Mr P Cowan, RVR driver
- Personal conversions with Mr E Bartley, Fitter Hexham Loco shed
- Personal recollections of travelling on the RVR



In November 1946, Mourilyan sugar mill 0-4-2T number 3 (John Fowler 12967 of 1911) is about to leave the mill yard, heading for the fields with a load of portable track.
Photo: Ken Rogers, from George Bond Collection

Portable railway track for light railways

by Lynn Zelmer

Scope of portable track applications

Agricultural and industrial enterprises the world over installed similar systems of light railway to carry their goods to mill or port or market. While established enterprises eventually developed a substantial fixed rail infrastructure, new enterprises and in-field operations often used less permanent, portable transport systems. These portable railways had rails and sleepers fitted together into lightweight track panels that could be quickly laid down and taken up again without skilled labour.

Manufacturers in Europe, the United Kingdom and the United States supplied track and other components for portable rail systems to industries, mines, farms and colonial plantations in the late nineteenth and early- to mid-twentieth centuries. A Welsh quarry, a timber contractor or a colonial sugar plantation could telegraph an order for a complete portable tramway system using the manufacturer's catalogue and product codes. Orenstein & Koppel's circa 1900 catalogue, found in Queensland's Mount Morgan Mine archives and still seemingly used in the 1950s, explains the advantages of a portable railway.

A workman conveys by means of a wheel-barrow on pretty level ground about 180 lbs., while on rails, well laid down, and by means of suitable vehicles, he can convey about 2000 lbs., or 13 times as much in the same time.

A horse draws at the average-rate on a level field-way about 1800 lbs, on a level road about 2½ tons.

On rails the horse will draw under the same conditions, and with less exertion, about 10 tons, and in one third of the time.

According to circumstances, the working by locomotives offers considerable advantages and savings compared with that by animals. As regards the capacity of the narrow-gauge locomotives, they will convey, according to their size, 50 tons to 150 tons, at a speed of 8 to 15 miles per hour.¹

Manufacturing capability at the destination was often minimal for a new enterprise but the prefabricated systems were simple enough that they could be assembled by unskilled workers. If the destination had riveting or other mechanical skills, significant savings in shipping costs (paying by weight not measure) could be made by on-site assembly. Some manufacturers established local or regional works, but distances and the time required for shipping often led to the local manufacture of subsequent requirements, especially when there was a related need for increased engineering capability in the major enterprise.

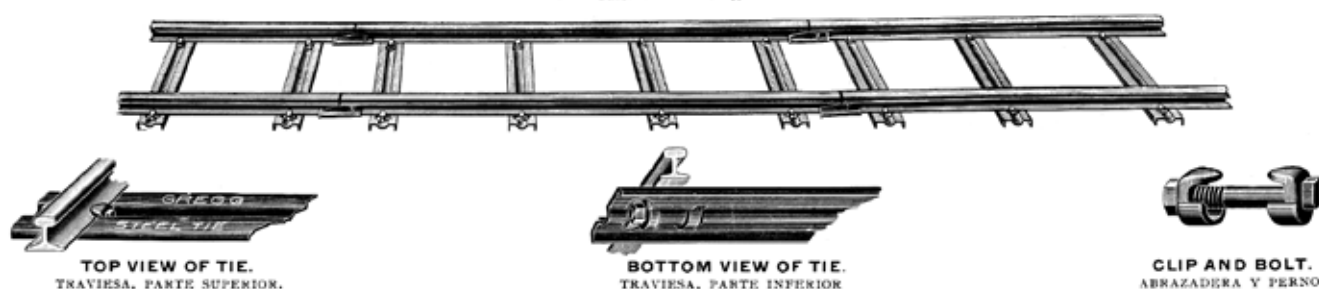
Temporary portable track was commonly laid in Australian and overseas sugar cane fields to bring cane from the cutters to a nearby permanent way for transport back to the mill. Laid without ballast, and sometimes without the track panels even being bolted together, these lines moved from field to field as cutting progressed in order to minimise the distance cutters were required to carry bundles of cut cane.

The Colonial Sugar Company mill at Homebush in north Queensland was possibly the first Australian plantation to adopt the Decauville system in its entirety, with Monsieur Paul Decauville himself overseeing the installation in 1883. According to a press report of the time, Homebush had 20 miles of the Decauville line, 500 cane trucks, horse drawn on the portable sections, and two locomotives operating on the permanent way.²

Other Decauville-supplied operations in Australia during the 1880s included Colonial Sugar Refining Company (CSR)

"GREGG PATENT" PORTABLE TRACK.

Patented Dec. 12, 1899.



TOP VIEW OF TIE.

TRAVIESA, PARTE SUPERIOR.

BOTTOM VIEW OF TIE.

TRAVIESA, PARTE INFERIOR.

CLIP AND BOLT.

ABRAZADERA Y PERNO.

"Gregg Patent" Ties are made of special analysis steel, rolled on special rolls, the shape combining maximum stiffness and bearing surface with minimum weight. Clips are made of best quality malleable iron. Bolts of steel with special side-head. The clips grip both edges of the rail and tie firmly, holding them perfectly solid with absolutely no chance of working loose. No Rivets to break off and consequent spreading of rails. Our track is so compact that it can be transported much more cheaply than track made with wooden ties and its life is more than five times as long. We furnish "Gregg" ties any width of gauge and for any weight of rail.

'Gregg Patent' Portable Track showing tie and clip design.

Drawing: Gregg Catalogue in Condé.¹³

(53,000 yards, of which roughly a third was presumably for Homebush); Queensland Sugar Co for the Innishowen Mill, Innisfail (2500 yards); Swallow & Derham, Hambledon (7000 yards); Alstonville Sugar Co (3500 yards); Loridan for the Pyramid Mill, Gordonvale (2500 yards), Pyramid Sugar Co, Gordonvale (4000 yards) and Coueslant for Chateau Tahbilk Vineyard near Shepparton (100 yards).³



Carrying what appears to be a five metre long straight section of portable track fitted with splice shoes.

Drawing: Gregg Catalogue in Condé.¹⁴

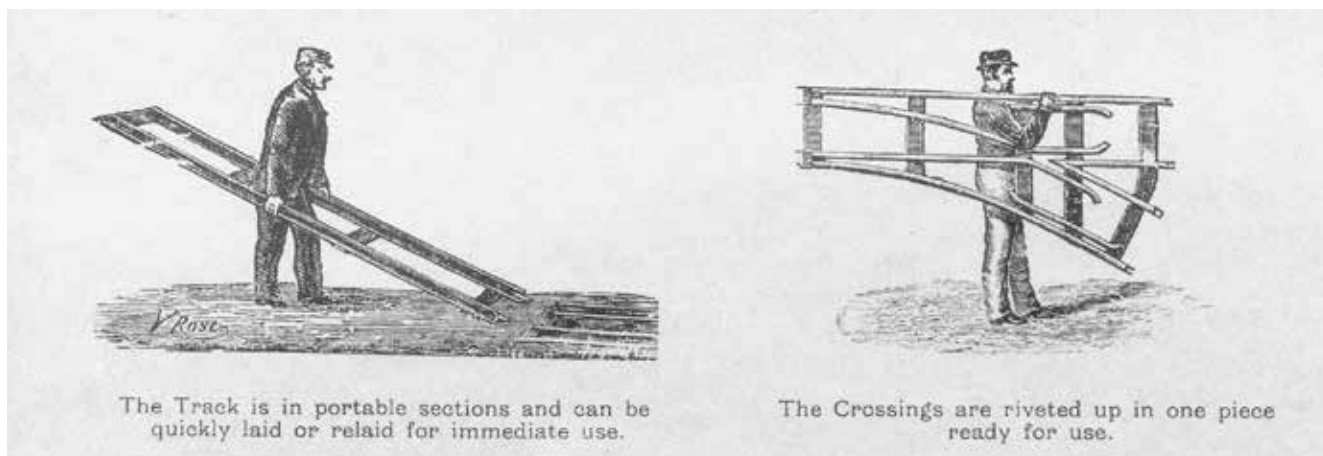
The 1880s were the heydays of the supply of portable railway systems, complete in some cases with light steam locomotives. After it was realised that steam locomotives and true portable track did not mix very well, it continued to be

used for non-locomotive worked lines in many industries, and the development of light internal-combustion locomotives during the first World War (WWI) increased their usefulness in extractive industries and construction.

Countries with links to specific European countries, or to the United States, were likely initially supplied by manufacturers in those countries, and specific industries may have been dominated by a particular company. The Fijian sugar mills were largely developed by CSR so it is likely that the first portable railway systems there were also supplied by Decauville. Orenstein & Koppel was undoubtedly an early supplier of portable track to mills in Java, as was Decauville. However by the early 1900s most major European manufacturers appear to have been represented across much of Australasia and Southeast Asia while Gregg was a major supplier for Hawaii and parts of Central America.

Temporary railway systems made a significant contribution to WWI military operations, with human and animal powered tramways as well as more permanent lines operated with steam and petrol powered locomotives. A popular video derived from historical footage shows soldiers loading ballast skips, for example, and pushing them to a loading stage during the construction of 600mm gauge lines in France.⁴

Some temporary lines became more permanent, albeit operated with horse power, and their legacy at Moreton Mill, for example, continued up to closure with at least one 'horse line' where bins were pushed in/out by tractor. In some cases portable track sections were simply bolted together and remained, often without ballast, from season to season, sometimes with some timber sleepers inserted. In other locations the portable track was replaced with more



The Track is in portable sections and can be quickly laid or relaid for immediate use.

The Crossings are riveted up in one piece ready for use.

These illustrations, taken from a 1905 advertisement for London agents Alexander Von Glehn & Co., show some of the advantages of the 'Decauville Portable Railway'.



LIGHT PATTERN SLEEPER for 10/20 lbs. rails
Code 36108

Assemblages de joints de rails pour voies transportables

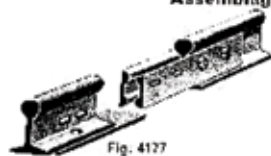


Fig. 4127
Eclisses normales à boulons en forme d'éclisses d'insertion avec plaque de joint.

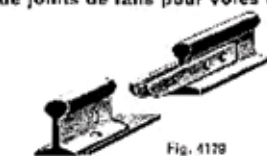


Fig. 4128
Eclisses d'insertion rivées à bouts arrondis avec plaque de joint.



Fig. 4178
Patins de rail, simple assemblage sans boulons.

Top: Hudson's lightweight sleeper design with standard Clip and Bolt pattern, "the cheapest and best to use for all ordinary work" with 10-20 lbs rail. Drawing: R Hudson Ltd.¹⁵

Above: Ferrostaal AG's three standard rail joiner (or fishplate) types for portable rail; each manufacturer had their own versions with slight variations. The cast version at right, similar to Gregg's patented 'splice shoe', was the most expensive but used only one bolt or rivet and, according to the manufacturers, offered a reliable and quick connect-disconnect. The other connectors are a variety of fishplate. Drawing: Ferrostaal.¹⁷

Above right: Orenstein & Koppel system (two screwbolts with nuts and clips for each end of the sleeper) for fastening rail to corrugated steel sleepers. Drawing: Orenstein & Koppel.¹⁶

Right: This standard left hand switch appears to be a 5 metre length, the same as a standard straight section. Drawing: Orenstein & Koppel.¹⁸

Below: Gregg's one piece portable switch, right hand, shown with a throw bar and connected to straight sections on all three ends. Drawing: Gregg Catalogue in Condé.¹⁹

Bottom: This Hudson catalogue diagram was provided to "help clients unfamiliar with the nomenclature of the different types" and for planning an order. The passing loop consists of a pair of turnouts and two sections of curved track, the length of the curved sections being determined by the radius of the curve (both of the curved section and the turnout itself) and the track centres required. The use of standard straight sections allows the loop to be extended as long as required. Drawing: R Hudson Ltd.²⁰

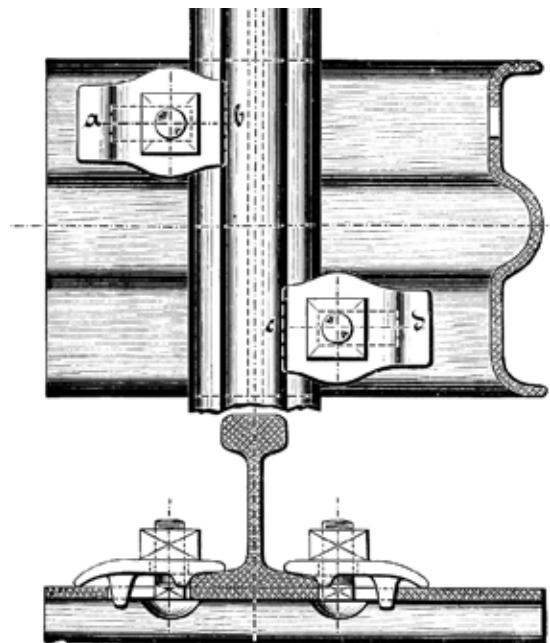


Fig. 3018.

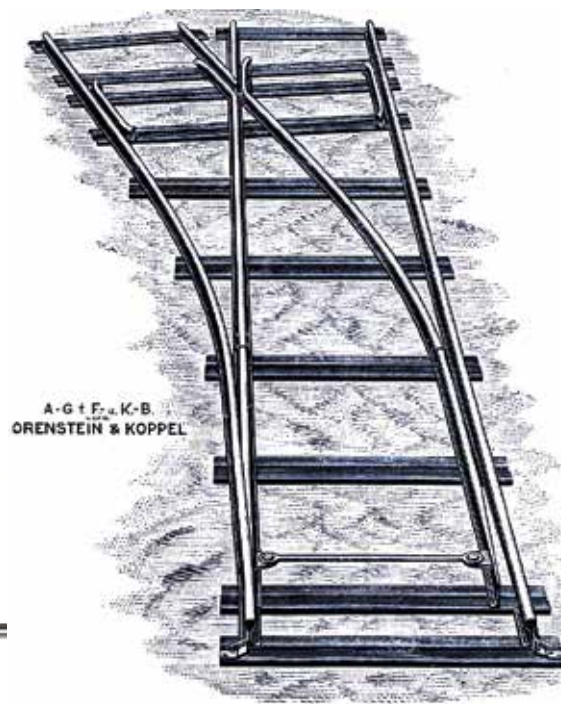
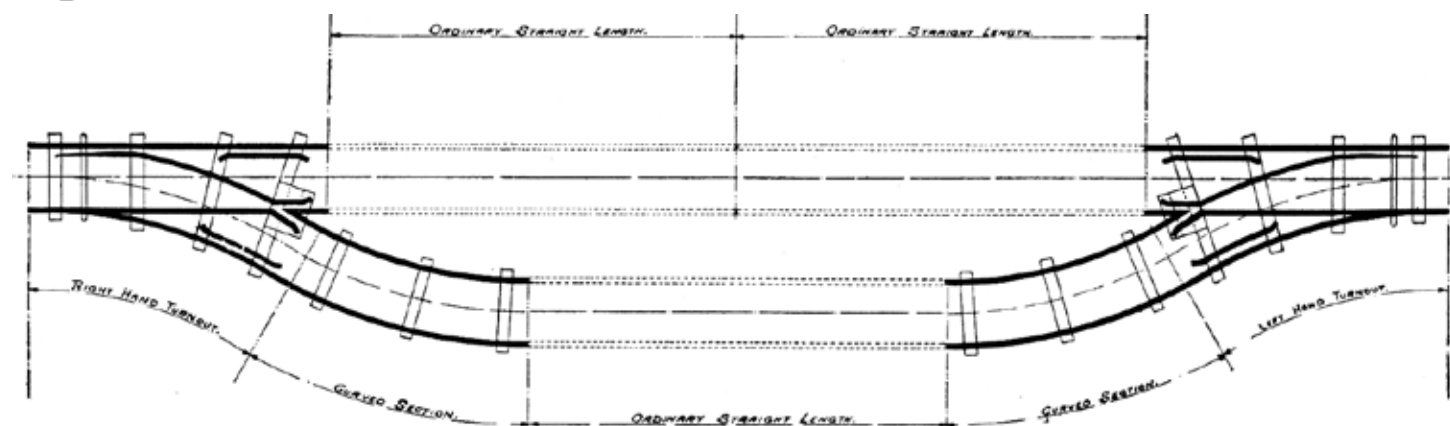
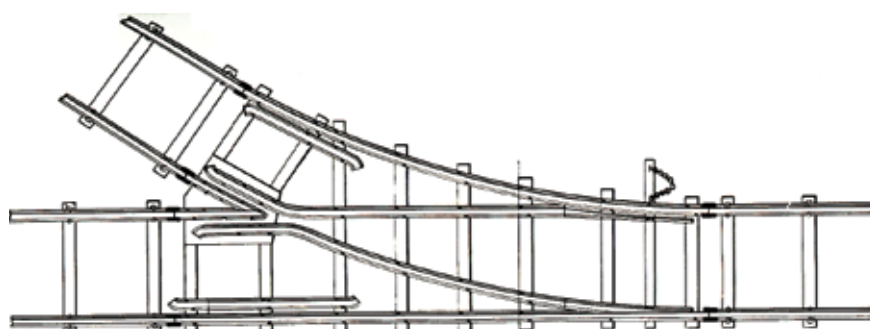


Fig. 3059.



COMPLETE PASSBY

Code 36241

Size	Description	Suitability and Maximum Load
1	10lbs rail, 7lbs 33-inch long standard clipbolt sleepers spaced 1610 per mile (1000 per kilometre), 24-inch gauge	Suitable for carrying light agricultural produce: maximum 36 cwt (4032 lbs) on four wheels, traction by hand at very slow speeds
2	12lbs rail, otherwise as per No 1 size	Max 48 cwt (5376 lbs) on four wheels
3 <i>Standard Size</i>	14lbs rail, otherwise as per No 1 size	Standard for light traffic with animal traction or small tractors at slow speeds (4mph), maximum three tons (6720 lbs) on four wheels
4	16lbs rail, otherwise as per No 3 size	Maximum three tons 8 cwt (7616 lbs) on 4 wheels
5	18lbs rail, 11lbs 33-inch long standard clipbolt sleepers spaced as per No 1	Traction by light locomotives at slow speeds (7mph), max four tons (8960 lbs) on four wheels
6 <i>Standard Size</i>	20lbs rail, otherwise as per No 5 size, fairly hard work with heavy traffic requires more sleepers (1760 per mile)	Standard for mining, contractors and estate work, traction by light locomotives at 8mph, max four tons 12cwt (10,304 lbs) on four wheels

Table 1: Hudson Portable Railways: sizes three and six were most common when the catalogue was published circa 1930.⁷

conventional but lightweight track and timber sleepers, probably using rail salvaged from an upgrade elsewhere. In any case the track might or might not have ever been ballasted with anything more than dirt. Even with some ballast the more permanent lines tended to sink into the ground and to disappear under weeds or grass.

Portable track systems, both for temporary in-field use and as the basis for more permanent lines between the cane fields and the permanent way, are still used in the cane fields of Fiji, Java and elsewhere, but it is unlikely that temporary track using portable rail sections would meet health and safety requirements in countries such as Australia, even for short term construction projects.

Portable track components

Manufacturers provided engineering and practical advice as well as the infrastructure components. A Hudson catalogue, for example, explained the economics of rail size.

*For long railways it is cheaper to use a light rail with locomotives having three axles, thus keeping a light axle load. For very short railways it is often cheaper to use a locomotive with two axles, and heavier rails. On estate work it is general to use a permanent line with heavy rails for the main haulage and light temporary lines in the cutting fields as feeder tracks. The latter are moved forward as cutting proceeds and are simply laid on the ground without ballasting. The wagons are loaded on these temporary lines and afterwards transferred to the main line.*⁵

Hudson was responsible for developing the specifications for British Standard portable railways in the twentieth century. The table above describes the six sizes for their portable railway systems and the limitations for each. At the time the Hudson catalogue was published the demand for sizes 1, 2, 4 and 5 had diminished to the extent that they were assumed to soon be obsolete.⁶ Hudson also supplied similar rail systems with heavier components but these were considered to be for permanent way.

Manufacturers supplied all or part of the components required for a railway, temporary or permanent. As noted above, some cost savings were possible by importing components for local assembly. At the very least, unassembled components made for more compact loads for shipping purposes. It was possible to use timber sleepers, rather than steel or iron sleepers, but that was likely confined to more permanent systems as portable track sections using timber sleepers would be much more difficult to handle without mechanical loading equipment.

A variety of sleeper designs were available, with the simplest being a formed steel plate with open ends as can be seen on the Gregg Patent and Hudson track sections. Soft ground, heavier rail and traffic all required a more substantial sleeper—perhaps with closed ends, longer, heavier or of an improved design. The 33-inch long sleeper, spaced 1610 per mile (one metre apart), for two foot gauge track, as described by Hudson, seems to be fairly common with manufacturers.⁸ Manufactured steel sleepers had pre-drilled holes to ensure correct gauge when assembled with that manufacturer's fastening system.

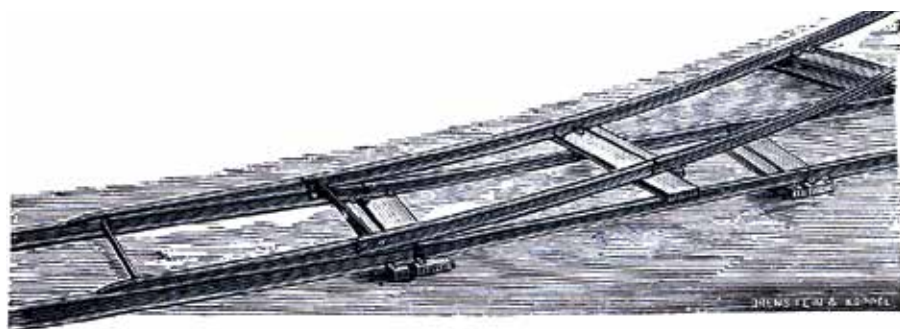


Fig. 3065.



Left above: Single inclined plane, used for temporarily transferring wagon on and off the permanent way. It consists of a single 5 metre section of 10 metre curved track and a 1.5 metre tongue section held together with tie rods. Other, more permanent options included an incline with a rotating section which could be turned to clear the main track. Drawing: Orenstein & Koppel.²¹

Left below: Hudson's portable type turntable with inclined mounts (inclined planes) placed on ordinary portable track, Drawing: R Hudson Ltd.²²

Use of the "Decauville" Off-railer.

The Off-railer is composed of two pieces of forged iron, about 4 ft. long, and the same height as the "Decauville" Rail, but tapering down at one end. It is riveted up in one piece with sleepers and fish plates. When it is placed upon a line it allows the Wagons to run easily from the original track on to the new one, the direction of the Track can therefore be quickly and temporarily altered (to left or right) at any point. Branches can be made in any direction from the fixed Track without interrupting the traffic.

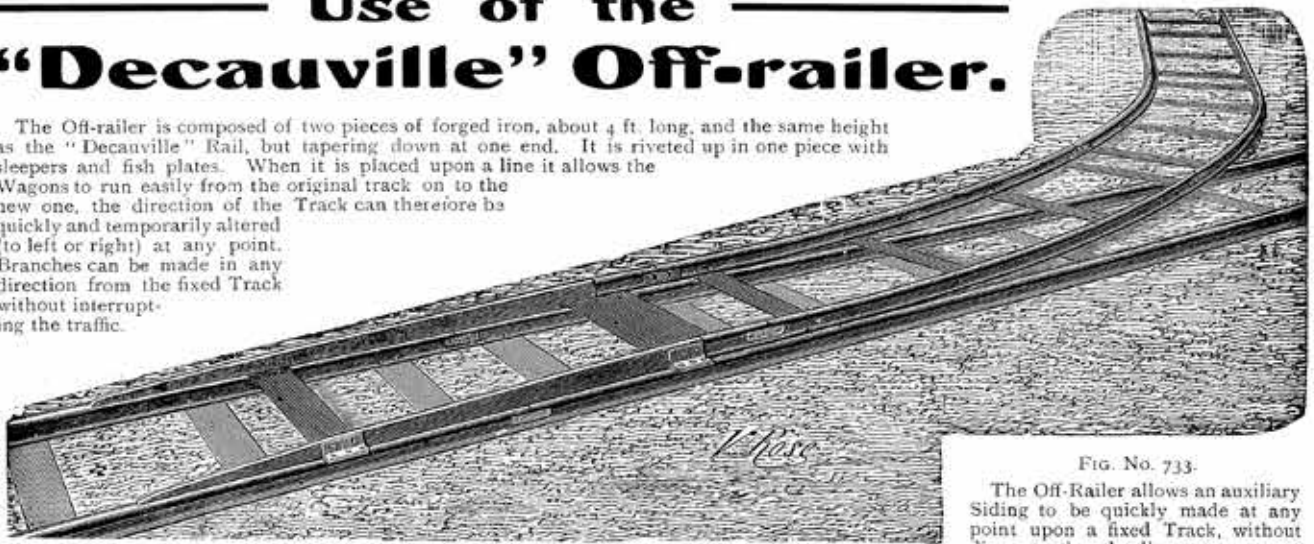


FIG. No. 733.

The Off-Railer allows an auxiliary Siding to be quickly made at any point upon a fixed Track, without disconnecting the line.

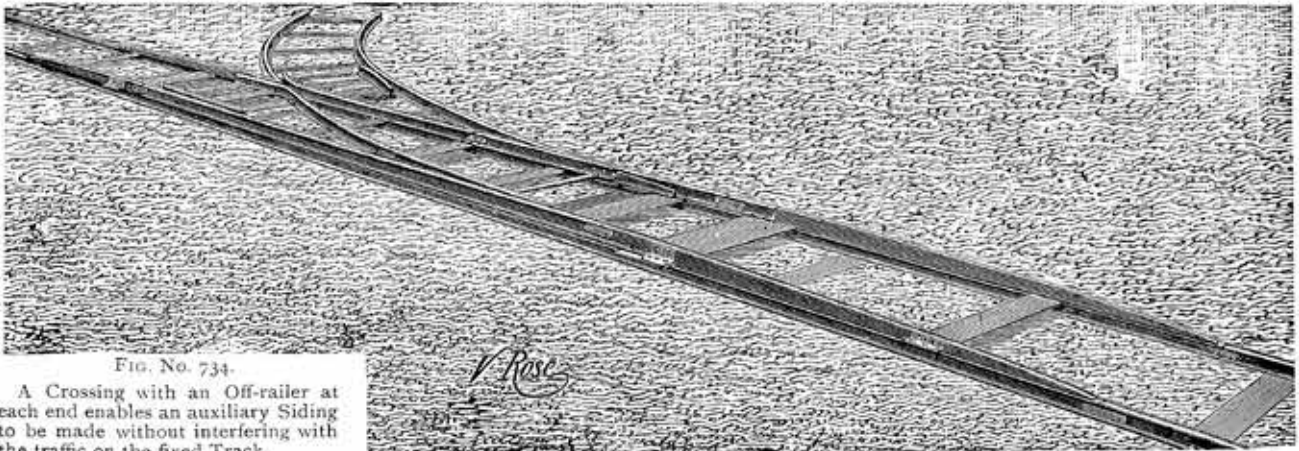


FIG. No. 734.

A Crossing with an Off-railer at each end enables an auxiliary Siding to be made without interfering with the traffic on the fixed Track.

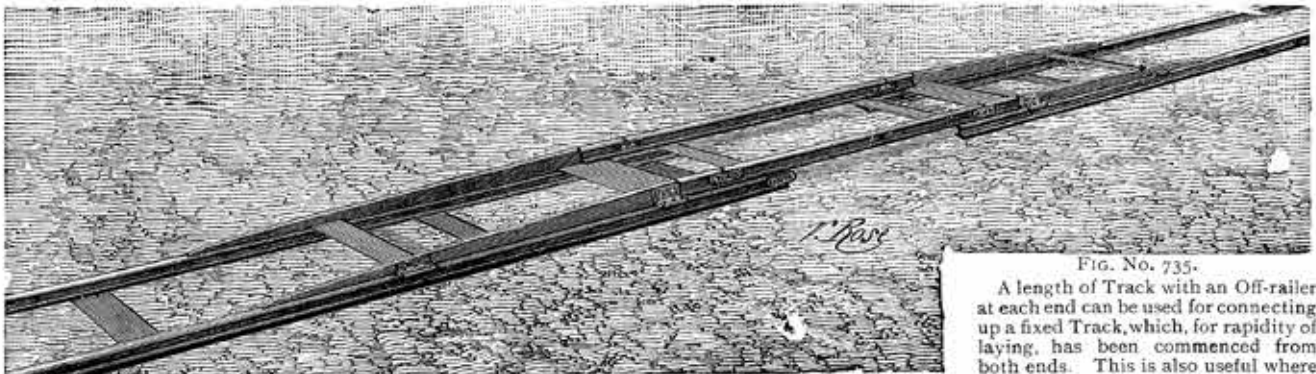


FIG. No. 735.

A length of Track with an Off-railer at each end can be used for connecting up a fixed Track, which, for rapidity of laying, has been commenced from both ends. This is also useful where the line is interrupted by a cross road.

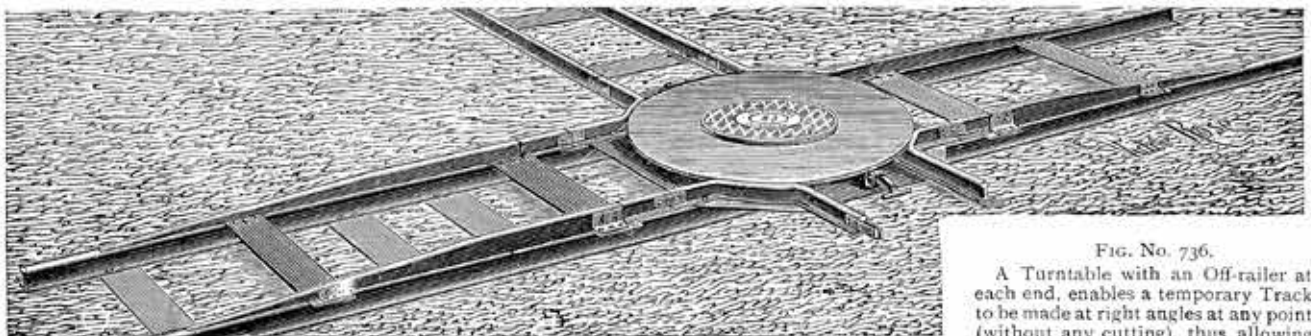


FIG. No. 736.

A Turntable with an Off-railer at each end, enables a temporary Track to be made at right angles at any point (without any cutting), thus allowing traffic to pass in four directions.

This page, from the "Decauville" Portable Railway Illustrated Catalogue No. 105, January, 1905, illustrates a number of useful applications for the "Decauville" Off-railer.



Portable track components at Tavua depot, Fiji, October 2009. Note that the track sections have a pair of fishplates at only one end of each rail.

Photo: Ian Dunn

Hudson's clip and bolt system for attaching rails to the sleepers is very similar to other manufacturer's basic designs. Alternatives included riveted fasteners and even welding, although welding track components together may just have been an act of desperation from an owner whose workers had lost too many of the standard fittings.

Similarly, manufacturers had fairly common systems for joining rail sections together. Ferrostaal AG's three standard rail joiner types were fairly typical, with an angle iron fitting being another possibility. The catalogues argued for the more expensive slip-on clips, with two on one end, but the author has only seen bolted on clips (fishplates) in Australian or Fijian use. In these two countries it appears usual to have one pair of fishplates on each end of the track panels, with the fishplates on opposite rails to allow them to be joined without turning them end for end. While the manufacturers were promoting their slip-on clips in the early 1900s, failing to bolt the sections together would certainly invite derailments and hinder productivity as loading increased.

Portable track sections normally came in fairly common lengths, regardless of gauge or manufacturer. Orenstein & Koppel, for example, state that: "Our standard lengths of railway sections are 5 and 2½ metres upon 5 and 3 sleepers respectively. Curved sections of 5 metres lengths are fitted on 6 sleepers to meet the heavier strain on them".⁹ Their standard curves had a radius for the outer rail of 10 or 25 metres.¹⁰

The catalogues also included a wide selection of other railway appliances, including inclined planes (to temporarily diverge from or cross the permanent way without a set of points or a crossing), portable level crossings (for tractors, wagons, etc., to cross the temporary line without damaging the track), portable turntables, and a variety of switches (points) and crossings.



Out depot south of Nadi, Fiji, looking back towards the chain tightening gang's shed, with portable track stacked to one side, May 2010. The straight sections appear to be 7 metres long, while the curved sections are closer to 3-4 metres.

Photo: Wayne Harman

Depending upon the length of the switch (turnout) set (2.5, 5 or 7-metres), it might come as a single unit or as two pieces for easier transport. The longer the set, the broader the radius of the curve and thus the longer the wheelbase of the wagon that could traverse it.

Today portable track generally only exists in museums in Australia. However sugar cane growers still require transport for their cut cane from the field, and in at least several countries this still means temporarily laid portable railway track with wagons moved by hand, animal power or tractor.

Acknowledgments

A sincere thank you to John Browning for suggesting this article, and providing both editorial assistance and research materials.

My personal interests are in modelling the sugar cane railways, thus the emphasis on that industry in this article. Portable railways were also very common in a number of other industries, including quarries, mines, sewage works, construction sites and other forms of agriculture. Roy C Link's handbook¹¹ provides an excellent introduction to these applications from a UK (Robert Hudson Ltd) perspective and is particularly useful for modellers. Additional easily accessible information on the history of portable railways can be found on the web site of the Ripon & District Light Railway.¹²

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1. Orenstein & Koppel. *General Catalogue Nr 600 of Portable and Permanent Railways, Wagons, Locomotives, etc.*, Berlin: Aktiengesellschaft für Feld- und Kleinbahnen-Bedarf vormals Orenstein & Koppel (Limited Company for

the Supply of Portable and Narrow Gauge Railways, Successors to Orenstein & Koppel), c 1900, page 3, emphasis in original. Original in the Capricornia Collection, Central Queensland University.

2. *Northern Star*. 'Portable Railways', 21 September 1883, Lismore, NSW: 6 October, page 2, reprinted from the *Mackay Standard*. From the National Library of Australia (<http://nla.gov.au/nla.news-article71706714>).

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4. wdtvlive42 (2011). *WW1 Narrow gauge train lines in France*, 2011. Video on YouTube (<http://youtu.be/F3s01i3aa7w>)

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6. As above, page 14.

7. As above, table summarised from page 14.

8. As above, page 14.

9. Orenstein & Koppel, op cit, page 14.

10. As above, page 15.

11. Link, Roy C. *Industrial Narrow Gauge: Catalogue and Handbook*, East Harling, Norfolk, UK: Roy C Link, 1994.

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17. Ferrostaal. *Materiel de Voies Portative et de Chemin de Fer (Industrie und Feldbahnen Catalogue)*, Essen: Ferrostaal AG, page 3. Downloaded from <http://www.bahnindianers-bilderbuecher.de/>.

18. Orenstein & Koppel, op cit, page 23.

19. Gregg Company, op cit, page 95.

20. R Hudson Ltd, op cit page 30.

21. Orenstein & Koppel, op cit, page 25.

22. R Hudson Ltd, op cit, Code 36361, page 38.



PG Sumberharjo, Java: portable track on cane truck. This mill loads its wholestalk cane longitudinally; unloading is done by sling, rather than tipping the truck. Sumberharjo still had seven steam locomotives in use in 2010 and is one of the few mills left in Indonesia to operate field lines.

Photo: John Browning



Olean Mill, Java: water buffalo pulling a single load of wholestick cane along a line constructed from portable track sections. Although the line looks to be quite well established, the ratoon cane springing up between the rails shows that the canefield was only harvested recently and the track will be moved elsewhere once harvesting moves to another area.

Photo: John Browning



Assembagus Mill, Java: a short inclined plane, followed by a section of tight radius curved track leading into a field from the permanent way. In Queensland, these were known as 'riding points'. It's impossible to tell from the photo, but the permanent way probably incorporates some timber sleepers and is ballasted with dirt claimed from the area beside the track.

Photo: John Browning



Industrial Railway NEWS

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Special thanks to contributors to the LRRSA, Cane Trains and Locoshed e-groups and the Sugar Cane Trains/Navvy Pics 2ft Facebook page.

QUEENSLAND

BUNDABERG SUGAR LTD, Bingera Mill & Millaquin Mill

(see LR 229 p.20)

610mm gauge

The initial estimate of damage to rail infrastructure and associated traffic control systems in the Bingera and Millaquin Mill networks following the unprecedented floods at the end of January was more than \$1 million. Although the many damaged bridges and culverts were insured against flood damage, the rail lines themselves were not.

The loco shed areas at Millaquin and Bingera remained above the flood although the rail yards at Millaquin and Fairymead were flooded. Around 285 bins were washed into canefields at various locations, requiring recovery and repair. There was major damage to the mill facilities at Millaquin, especially to a new bagasse plant. Aerial photos of the old Fairymead Mill area taken at the height of the flood showed that the upper portions of Com-Eng 0-6-0DH SHARON (A1935 of 1959 [not 1939 as shown in LR 229]) Malcolm Moore 4wDH 1025 of 1943 rebuilt Bingera 1969, and the Gemco sleeper replacement machine (241380085202 R807 80 of 1980) were barely visible above the water. SHARON was recommissioned by the end of February and the engine of the sleeper replacement machine had been removed for repairs and refitting.

The ferry used to convey cane across the river between the Bingera and Millaquin rail systems was lost. A major casualty was the rail line from Millaquin to the ferry terminus at Strathdees, built in recent years, which runs along the right bank of the Burnett River downstream of the mill. The old longer route to Millaquin from the ferry site and the old Qunaba Mill area is still available for use if needed. Major flooding affected the lines in the Fairymead area and

LOCOMOTIVE, ROLLING STOCK & EQUIPMENT MANUFACTURERS/SUPPLIERS

TERRATEC ASIA PACIFIC PTY LTD, Hobart

Terratec is an Australian company specialising in the design and manufacture of tunnel boring machines, raise boring machines, and other equipment for tunnelling and mining applications. Sometimes, customers require a complete tunnelling equipment package and this may include rail equipment. Terratec has an agreement with China CNR Corporation Limited to design and supply specific-purpose locomotives and rolling stock. This includes at least one narrow gauge 4wBE locomotive that is shown on the company's web pages. No locomotives have so far been supplied for use in Australia.

Anton Jurasovic 2/13; <http://www.terratec.com.au/index.php>

washouts at Splitters Creek on the main line between Fairymead and Bingera required reballasting.

There was some minor damage to timber bridges and a couple of large culverts were severely washed out, requiring reinstatement. A lot of small maintenance equipment was lost as a maintenance shed was engulfed at Fairymead. Work is underway to bring the rail system back into full operation for the 2013 crush, with projected cane production estimated to be reduced by more than 10%.

Bundaberg Sugar 2/13; www.sugaroline.com 30/1/2013; *News-Mail* (Bundaberg) 19/2/2013 via Shane Yore; Editor

DOWNER EDI RAIL PTY LTD, Maryborough

(see LR 217 p.24)

1067mm gauge

Walkers B-B DH DH73 (718 of 1974), obtained

as a workshops shunter from QR in 2010, is still receiving attention in preparation for recommissioning. Currently, shunting is often done by a rubber-tyred mobile crane.

Luke Horniblow 2/13

ISIS CENTRAL SUGAR MILL CO LTD

(see LR 226 p.22)

610mm gauge

The Gemco sleeper replacement machine (521885005295 R853 87 of 1987) has been rebuilt at some point with a larger engine and radiator with a consequent forward extension to accommodate them.

An overpass is to be constructed before the start of the 2013 crush to replace the dangerous level crossing of the Isis Highway between Johnsons Bank and New Loop.

Luke Horniblow 1/13; Carl Millington 1/13; Shane Yore 2/13





Above: Above: Kalamia Mill's freshly repainted tamping machine (Tamper 4375626 of 1976) in the navy area at the mill on 13 January with the remains of Com-Eng 0-6-0DH KALAMIA (A1409 of 1955) behind it. Photo: Luke Horniblow

Below: As the clouds threaten to roll in over Gunnedah in north-west NSW, on Monday 18 February, Manildra Group locomotives MM02 (Clyde Co-Co DE 64-342 of 1964) and MM04 (Goninan Bo-Bo DE 012 of 1961) sit in the Namoi Flour Mill sidings awaiting their next turn of duty. Photo: Peter Reading



MACKAY SUGAR LTD, Mackay area mills

(see LR 229 p. 20)

610mm gauge

Eimco B-B DH accident victim *GARGETT* (L255 of 1990) will be returned to service in 2013 with a straightened frame and a new V12 MTU 2000 series engine. Farview Engineering have delivered another bogie brake van chassis which is being fitted out at Farleigh Mill for use with Walkers B-B DH *NETHERDALE* (699 of 1972 rebuilt Walkers 1997). It will become B VAN 8. Locomotives being used on slack season track maintenance work include EM Baldwin B-B DH *SHANNON* (7126.1 5.77 of 1977) and *MIA MIA* (9815.1 10.81 of 1981) on ballast haulage, Clyde 0-6-0DH *DEVEREUX* (67-568 of 1967) hauling pre-welded rail lengths, and Clyde 06 0DH *NELLIE* (58-188 of 1958) on the in-situ rail welding train. Bin greasing is done at Pleystowe and bins requiring attention receive it in the bin shops at Pleystowe and Farleigh. EM Baldwin B-B DH *CHARLTON* (9562.1 6.81 of 1981) with B VAN 2, the Gemco paired 4-wheel units, is being used on bin transfers. Former Cattle Creek Mill Com-Eng 0-6-0DH *CATTLE CREEK* (B1724 of 1957) is reported to have been sent to Mossman Mill in late 2012, apparently for spare parts.

Gemco sleeper replacement machine 521684004739-R841-85 of 1985 has been sold to South Johnstone Mill. This machine was new to Pleystowe Mill and was stored out of commission at North Eton following its withdrawal in 2008.

Scott Jesser 2/13; Luke Horniblow 2/13; Hayden Quabba 3/13

MSF SUGAR LTD, Mulgrave Mill

(see LR 229 p.21)

610mm gauge

The new track alignment around Red Hill at Forest Gardens in the southern suburbs of Cairns was complete by 22 January and ballasting was taking place with Clyde 0-6-0DH 14 (56-86 of 1956) hauling two ballast hoppers from a loading point in Edmonton.

On 1 February, the new deviation was being finished off. Ballast hauling was now being done by Clyde 0-6-0DH 18 *BARRON* (64-379 of 1964) while the Plasser KMX-12T (432 of 1997) tamper was

packing the completed track. EM Baldwin 0-6-0DH 11 *MAITLAND* (4413.2 8.72 of 1972) departed the site hauling a train of line bogies loaded with lifted track panels from the old alignment.

Carl Millington 1/13, 2/13

MSF SUGAR LTD, South Johnstone Mill

(see LR 229 p.22)

610mm gauge

An interesting recent arrival has been freshly repainted Gemco sleeper replacement machine 521684004739-R841-85 of 1985, acquired from Mackay Sugar. This machine was new to Pleystowe Mill and was stored out of commission at North Eton depot following its withdrawal in 2008. It was noted at South Johnstone during February.

Luke Horniblow 2/13

SUCROGEN (HAUGHTON) PTY LTD,

Invicta Mill, Giru

(see LR 229 p.22)

610mm gauge

Clyde 0-6-0DH *KALAMIA* (67-569 of 1967) is being fitted with a new Mercedes engine and Allison automatic transmission for the 2013 season.

With sections of the Haughton River bridge removed as usual for the wet season, the Clare depot becomes the base for locomotives and equipment required out on the line. Seen there in mid-January were Com-Eng 0-4-0DH *INVICTA* (CA1040 of 1960), three ballast tamping machines (Plasser KMX-06-16 133 of 1978, Plasser KMX-12T 255 of 1982 and Tamper STM-XLC 94952 of 1993) and the Tamper ballast regulator (BESM1 1775577 of 1977).

Also present was Walkers B-B DH *GIRU* (Walkers 593 of 1968 rebuilt Tulk Goninan 1994) which will most likely be used for RSU (remote shunting unit) training before the start of crushing.

Luke Horniblow 1/13

SUCROGEN (KALAMIA) PTY LTD

(see LR 229 p.22)

610mm gauge

The mill's tamping machine (Tamper SVT-JW 4375626 of 1976) was noted during January in the navy area at the mill newly repainted with the disused and engineless old *KALAMIA* (Com-Eng 0-6-0DH A1409 of 1955) nearby.

Luke Horniblow 1/13

SUCROGEN (HERBERT) PTY LTD,

Herbert River Mills

(see LR 229 p.22)

610mm gauge

A section of the Victoria Mill Bambaroo line is being replaced at Scrubview using new concrete sleepers and long welded lengths of rail. The rail crossing at Scrubview Road will be renewed as part of this work. Clyde 0-6-0DH *CENTENARY* (64-381 of 1964) was noted on the rail train at Scrubview during February.

Victoria Mill's Clyde 0-6-0DH *PERTH* (69-682 of 1969) is being rebuilt with new engine, new converter and a complete repaint. It is the last of the district's Clyde and Baldwin locomotives to receive this treatment.

Industrial Railway NEWS

New 8-tonne bins from China continue to be assembled at Corradini Engineering using mill labour. This is a start-stop process as batches of components are received. It is expected that 400 new bins will have been built by the end of 2013. Luke Horniblow 2/13; Chris Hart 3/13

SUCROGEN PLANE CREEK PTY LTD, Sarina

(see LR 229 p.22)

610mm gauge

EM Baldwin B-B DH D12 (6890.1 10.76 of 1976) is being fitted with a new MTU engine for the 2013 season while Com-Eng 0-6-0DH D8 (FC3777 of 1964) has been used for bin shop operations.

Michael Brown 2/13, Hayden Quabba 3/13

THIESS PTY LTD, The Narrows LNG Tunnel, Gladstone

(see LR 229 p.25)

762mm gauge

The tunnel boring machine (TBM) for this project has come from the Northern Sewerage Project in Melbourne. The TBM was being assembled on site in Gladstone by the end of February. Once the segment-lined tunnel is completed it will be

flooded with water and the gas transmission pipeline will be inserted through it.

Philip G Graham 1/13; *The Observer* (Gladstone) 1/3/2013

VICTORIA

AGL HYDRO PARTNERSHIP, Rubicon

(see LR 222 p.25)

610mm gauge

The historic 4wBE inspection car built in about 1946, *The Jeep*, has arrived back at Rubicon from Bogong Creek and is being regauged to 2ft gauge so that it can be used again. AGL has agreed to re-lay rails on the recently constructed Syphon Bridge and the Three Beech Creek Bridge so that the possibility exists that the tramway could be used for inspections again. The larger bogie battery electric personnel car of 1938, *The Tram*, is still housed in its shed at the head of the haulage incline.

The Electric Telegraph 15, 9/12, Peter Evans 11/12, Alexandra Timber Tramway & Museum 12/12

? Somerton

(see LR 224 p.28)

762mm gauge

The locomotive from the Northern Sewerage Project advertised online last year has been advertised again, at graysonline, with bids

closing on 19 February. The locomotive is a Schöma Model CHL 40G 4wDH with a Deutz engine and hydrostatic drive. It is convertible to 610mm gauge. The photographs of it were in the same indoor location as in the previous advertisement.

Also advertised for sale were two 762mm gauge Mühlhäuser 4-wheel grout cars of 3 cubic metres capacity with electrically-powered agitators.

Contact was Amber Cochrane amberc@grays.com.au or (03) 8552 4444.

<http://www.graysonline.com/sale/3002733> via Philip G Graham 2/13

WESTERN AUSTRALIA

BHP BILLITON IRON ORE PTY LTD

(see LR 229 p.25)

1435mm gauge

Twelve new Model SD70ACe/Ici Co-Co DE locomotives numbered 4391 to 4402 from Progress Rail, Muncie, Indiana (20118575-001 to 20118575-012 of 2012) were unloaded from 3 January 2013. A further twelve locomotives are expected to arrive during March. The previously-delivered locomotives 4374 to 4390 are Progress Rail 20108424-001 to 2018611-017 of 2012.

MotivePOWER January/February 2013; John Cleverdon 1/13



On the morning of 25 February, Scott Jesser found Mackay Sugar's Clyde Model DHI-71 0 6-0DH NELLIE (58-188 of 1958) standing on the Marian Mill main line at Otterburn with the bogie welding wagon.



Above: With the deviation at Red Hill, south of Cairns, almost completed on 1 February, Mulgrave Mill's EM Baldwin 0-6-0DH 11 MAITLAND (4413.2 8.72 of 1972) hauled back to Gordonvale a load of track panels lifted from the old alignment. It was photographed at Crossland Road, Kamma, by Carl Millington

Left: Although more than 30 years old, Mackay Sugar's Plasser Model KMX-12T bogie ballast tamper (246 of 1982) is kept in very good condition for the hard work it performs. Hayden Quabba photographed it parked at Allandale 6 on the Marian Mill system on Sunday 10 February.

Below: On the same day, Hayden Quabba found EM Baldwin B-B DHMIA MIA (9815.1 10.81 of 1981) parked with loaded ballast hoppers at the old navy shed at Pleystowe ready for its next turn on maintenance season track duties.





Above: On 22 January, Mulgrave Mill's Clyde 0-6-0DH 14 (56-86 of 1956) approaches the loading point at Edmonton with two ballast hoppers that will be filled from a stockpile and then taken back to Red Hill for use in the deviation track works there. Photo: Carl Millington

Left: South Johnstone Mill's EM Baldwin B-B DH 32 LIVERPOOL (10385.1 8.82 of 1982) receives attention in the loco shed on 23 February. The size of the final drive units squeezed inside 2ft gauge bogie wheelsets can clearly be seen. Photo: Luke Horniblow

Below: Stored in the Mulgrave Mill loco shed during the crushing season, the very first Com-Eng cane locomotive (0-6-0DM A1001 of 1955) is relegated to the navy yard during the maintenance season. In the background is the mill's KMX-06 tamper (Plasser 98 of 1975). Photo: Luke Horniblow, 27 January 2013.



THE PILBARA INFRASTRUCTURE PTY LTD

(see LR 229 p.25)

1435mm gauge

Eleven new Model SD70Ace Co-Co DE locomotives numbered 709 to 719 from Progress Rail, Munice, Indiana (20118693-001 to 20118693-011 of 2012) were delivered to Port Hedland from 10 January. Also in the shipment were spare parts from Model SD90MAC Co-Co locomotives which will be used to maintain the fleet of this type of locomotive. The previously-delivered locomotives 701 to 708 are Progress Rail 20118611-001 to 20118611-008 of 2012. A total of 528 new ore cars will be delivered in the first three months of 2013. Final commissioning of the Positive Train Control system will take place by the middle of the year. Under this system, the train receives information about its location and where it is allowed to safely travel. Equipment on board the train enforces this authority, preventing unsafe movement.

MotivePOWER January/February 2013; *Rail Express.com.au* 1/2/2013; John Cleverdon 1/13

PILBARA RAIL

(see LR 228 p. 24)

1435mm gauge

After nine years of legal proceedings initiated by Fortescue Metals Group, on 8 February the

Australian Competition Tribunal ruled that Rio Tinto did not have to open its railway lines to access by other operators.

ABC News 11/2.2013

OVERSEAS

FIJI SUGAR CORPORATION

(see LR 229 .25)

610mm gauge

The Fiji Sugar Corporation has announced that it will sign long-term contracts with current lorry operators for the road delivery of cane when it takes over responsibility for road transportation from the 2013 season. Growers will pay for transport based on the distance from the mill rather than through the use of a flat fee as at present. Improvements to rail transportation and increasing the amount of cane transported by rail will also be in place to improve logistics and reduce costs.

The new cane quality payment scheme is said to be ready for implementation in 2013. There is also renewed talk about the possible reintroduction of mechanical harvesting to some flat areas as early as the 2013 season.

Fiji Times Online 21/2/2013 & 22/2/2013; Fiji Broadcasting Corporation News 22/2/2013 & 24/2/2103;

OK TEDI MINING LTD, PAPUA NEW GUINEA

(see LRN 229 p.25)

The Schöma diesel locomotive used on the drainage tunnel project was not included in an equipment sale advertisement with tenders closing in October 2011. The advertisement included the tunnel boring machine and California switches (relocatable points) but no rolling stock. A search of a US Customs database revealed no sign of the locomotive being returned to Mining Equipment Inc so it may have been retained for further use at the mine or on sold elsewhere separately.

Philip G Graham 1/13, 2/13

ERRATUM

The following end notes were inadvertently omitted from the letter on page 26 of the February issue of *Light Railways*:

1. Anon, 1986?, Electrolytic Zinc Company of Australasia Ltd, Description of Activities, Risdon Works, Tasmania.
 2. Cook, A, 1923, The handling of materials at the Risdon works of the Electrolytic Zinc Co. of Australasia Ltd, Proc. AusIMM, NS No 52.
 3. Snow, W, 1937, Electrolytic Zinc at Risdon, Tasmania, Transactions AIME, 121, 482.
- We apologise to the author for this omission.



Book Review

Comeng: A History of Commonwealth Engineering Volume 4: 1977–1985

by John Dunn

Published 2013 by Rosenberg Publishing Pty Ltd. 290 x 210mm, hard cover with colour dust jacket, 288 pages, 599 colour and B&W photos, 53 drawings, 36 paintings and illustrations. Available from the publisher at www.rosenbergpub.com.au or from the ARHSnsw bookshop, phone (02) 9379 6633, or on-line at www.arhsnsw.com.au Recommended retail price \$65.00

As many readers will be aware, celebrated rolling stock designer and author John Dunn passed away after a long illness on 30 December 2012. There is, therefore, a certain bittersweet aspect to reviewing this, the fourth volume in John's well-regarded series on the history of Commonwealth Engineering (Comeng), which he worked so hard against the odds to complete. The first volume in this series, covering the period from 1921 to 1955, appeared in 2006 and

was reviewed in *Light Railways* 191. Volume 2 (covering 1955 to 1966) appeared two years later and was reviewed in LR 203, while Volume 3 (covering 1966 to 1977) appeared after a further two-year break and was reviewed in LR 216.

This latest volume covers the period from 1977 to 1985 – a time that many in the rail industry would regard as a 'golden age' for Comeng. During this era the company produced a wide range of memorable railway products, including the 85 Class and 86 Class high-horsepower electric locomotives for NSW, new electric locomotives for Queensland, Melbourne suburban EMUs, Adelaide's 'Jumbo' DMUs, Z, A and B Class trams for Melbourne, stainless steel air-conditioned cars for QR and the iconic XPT for the NSW State Rail Authority.

The ongoing activities of Comeng's successful South African subsidiary – Union Carriage & Wagon Co. (Pty) Ltd – also mentioned in Volumes 2 and 3, are well covered, as are the various fact-finding missions overseas during this period, exploring new technologies emerging in Europe and the USA.

As with the previous volumes, some of the most fascinating aspects of the book involve the well-documented stories of projects and tenders that didn't come to fruition. Likewise, the stories of the many people behind the scenes give a real human insight into what made a great organization like Comeng work.

The company's involvement in products that would normally fall within the orbit of this magazine was limited during this period – building some locomotives and rebuilding older ones for Hamersley Iron, supplying a diesel loco to Townsville Harbour Board and building some

private rolling stock is about the sum of it – but the overall interest level of this book is such that only the most narrowly focused railfan could fail to be impressed.

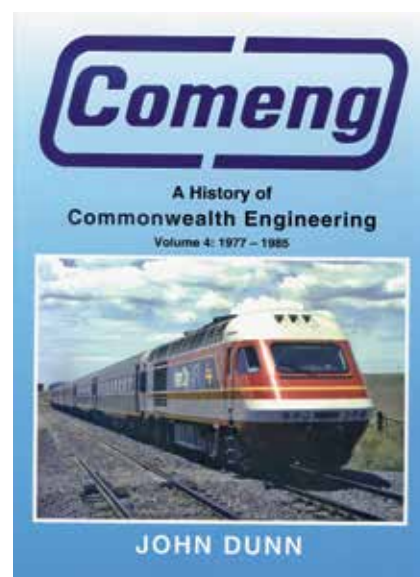
The only criticism that could possibly be levelled at this volume is that it's so full of information – text, photos, diagrams, paintings – that it could take quite a while to work through it all!

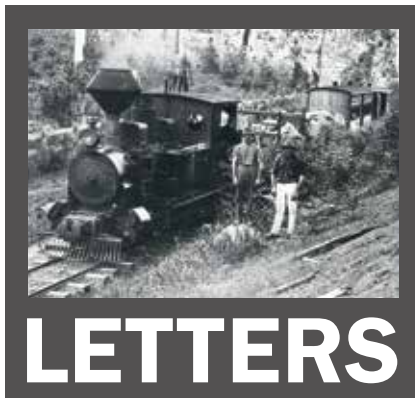
Fortunately, John also managed to complete the text for Volume 5, the final chapter, before he died, and it will be published in November this year.

Volume 4: 1977–1985 is a well-researched, well written and lavishly illustrated book, every bit the equal of its predecessors.

Highly recommended.

Bruce Belbin





LETTERS

editor@lrrsa.org.au

Dear Sir,

Gemco battery locomotives of the Sydney MWS&DB, Light Railways No 184

I visited five tunnels being excavated by the Metropolitan Water Sewerage and Drainage Board (MWS&DB) in Sydney during the mid to late 1970s. These had an interesting variety of excavation methods and transport of the excavated material.

The Wicks Road adit in North Ryde was being developed at a width of 1.5m and a height of 2.1m by a Robbins 75-150 tunnelling machine when I visited in February 1974, and by conventional drilling and blasting in January 1975.¹ A 3 ton Gemco 2 ft gauge battery locomotive hauled chips of rock from the tunnelling machine in trucks which normally carried concrete. The rail line ran a short distance to surface and the tipping area.

At the Bellamy Street shaft in Thornleigh rock from conventional drilling and blasting at the tunnel face was loaded by a small rail mounted compressed air rocker shovel into side tipping trucks of a similar pattern to those sold by Gemco. The rocker shovel was about the size of an Eimco 12B model. Two 1½ ton Gemco battery locomotives of 2ft gauge (Nos. 44 and 60) hauled the trucks. A Walco hoist brought the trucks to surface through the shallow shaft for

tipping. I understand this was the common excavation and haulage system used by the MWS&DB at the time. I visited this shaft, which was part of the Thornleigh Submain Section 3, in February and August 1974.

Two shafts and tunnels near the corner of Elizabeth and Foveaux Streets, Surrey Hills were visited in July 1978. Hand excavation of the clay was used in one and sand in the other. The excavated material was hand loaded into kibles mounted on four wheel trucks running on approximately 15in gauge track fabricated from steel angle. The kibles were lifted out the shafts with compressed air powered hoists.

Three shafts accessed tunnels near the corner of Martin Place and Elizabeth Street in the city. The rock was broken using a large number of drillholes and a hydraulic powered wedge progressively placed in the drillhole closest to the void already formed. This method avoided any vibrations from blasting. I recall the rock being loaded and transported in kibles on rails in a similar fashion to the shafts in Surrey Hills. I visited these in July 1978.

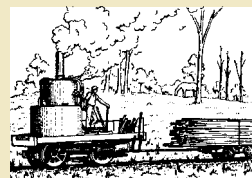
A tunnel was being developed at Corinth Road, Heathcote, which I visited July 1978. An Atlas Copco Mini Fullfacer 1524 tunnelling machine excavated rock and dumped the chips into a bunker car behind, which discharged into a 2ft 6in gauge battery powered shuttle car for transport to the surface. The Mini Fullfacer machine had a cutting head which swung down and back up the tunnel face, creating a 1.5m wide and 2.4m high excavation with a curved floor and roof, and parallel walls.² The 2ft 6in track crossed a 2ft gauge track from an adjoining adit on surface where a 1½ tonne locomotive was located.

1. J Braybrooke, 1985, Tunnelling in the Sydney Region, in *Engineering Geology of the Sydney Region*, Balkema.
2. Maigre, 1978, The use of tunnel boring machines for driving small area tunnel in sandstone and shale, Third Australian Tunnelling Conference, Sydney.

Tony Weston
Melbourne, Vic



MWS&DB 1½ ton Gemco battery locomotive number 60 on a rake of side tipping trucks at Bellamy Street shaft in August 1974.
Photo: Tony Weston



LRRSA NEWS

MEETINGS

ADELAIDE: "Pichi Richi and Kalamazoo"

Peter Letheby will show film of Pichi Richi and a Kalamazoo trip. Bring along an item of light rail interest. We would like to hear from any member who can supply current information on heritage or tourist light rail sites in South Australia.

Location: 150 First Avenue, Royston Park.

Date: Thursday 4 April at 8.00pm.

Contact Les Howard on (08) 8278 3082

BRISBANE: "John Browning's overseas adventures"

John Browning will present images of his recent overseas trips to Fiji, Java and Tasmania.

Location: BCC Library, Garden City Shopping Centre, Mount Gravatt. After hours entrance (rear of library) opposite Mega Theatre complex, next to Toys'R'Us.

Date: Friday 19 April at 7.30pm.

MELBOURNE: "Trains For Amusement"

Chris Holmes and Peter Medlin will be giving a presentation about some of the miniature and amusement trains that operated near beaches, amusement parks and at many other locations from the late nineteenth century to the present. Bring along your photos or memorabilia of these trains.

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

Date: Thursday 11 April at 8.00pm

SYDNEY: "Bruce Macdonald and The Museum of Historic Engines"

Mr Bruce Macdonald, long associated with steam tram and narrow gauge steam preservation, will talk about the establishment and operation of the steam museum at the Goulburn (NSW) Water Works site. Bruce was curator of the museum for 20 years, from 1958. During this time a scenic 2ft gauge railway was established and a wide variety of industrial steam locomotives were preserved there, along with the magnificent original steam pumping engine. The collection has long been dispersed, so come along to the meeting for a nostalgic photo presentation showing what interesting locomotives and rolling stock once existed there.

Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).

Date: Wednesday 24 April at 7.30pm

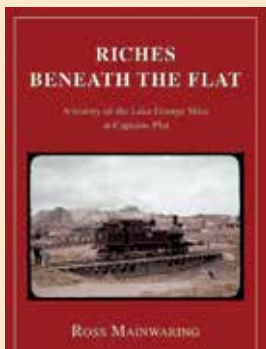
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By Ross Mainwaring

Published by the LRRSA.



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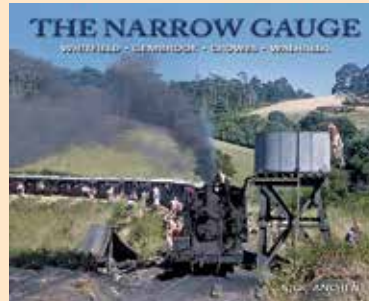
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By Nick Anchen

Published by Sierra Publishing



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By David Jehan

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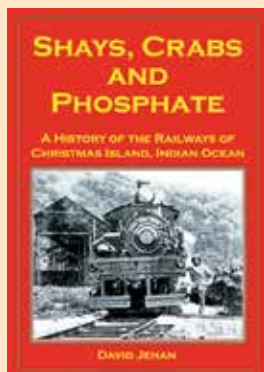
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Tall Timber & Tramlines Queensland

By John Kerr

Published by the LRRSA.

Describes all Queensland timber
tramways known to the author.

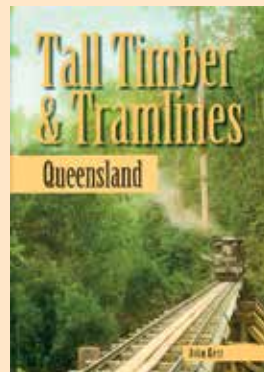
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RESEARCH

Please send any field reports or research questions to fieldreports@lrrsa.org.au or to P.O. Box 21, Surrey Hills, Vic 3127.

Thank you to everyone who has contributed, either directly, or via the Yahoo group. Scott Gould

Bundaberg Foundry

When researching for the book 'Built by Bundaberg Foundry' early last year, I visited the Bundaberg Foundry and was fortunate enough to be given access to records in the strong room used for the storage of engineering drawings and other files. The strong room is situated under the drawing office and housed an extensive and priceless record of work done over much of the Foundry's 125 year history. Locomotive drawings generally dated from the early 1950s but there were many other older ones of rolling stock and sugar mill machinery. These were housed in wooden plan drawers arranged along the walls of the strong room. There was also a collection of drawing office correspondence files including ones that dealt with the story of the Bundaberg Jenbach diesel locomotives and other matters relating to diesel locomotives in the 1950s and 1960s. Unfortunately, many other files, including the correspondence on the Bundaberg Fowler steam locomotives, had been moved out and could not readily be located. They were thought to have been placed in storage elsewhere on the site.

The disastrous and unprecedented floods of January 2013 caused mayhem on the Foundry site with at least a metre of water through most of the workshop areas leaving thick deposits of stinking silt everywhere. Floods in 1890, 1892 and 1942 had slightly affected the site, but this flood was half a metre higher than the previous highest recorded one in 1890. Because there was such short notice of the size of the flood, there was no time to move anything upstairs to

the drawing office. About 800mm of water went through the strong room, meaning that more than a third of the plan drawers were inundated, affecting up to 15 000 drawings. Some drawings were beyond saving. What was able to be salvaged has gone into cold storage but with the priority on restoring operational capacity and attempting to complete urgent work on hand for many sugar mills before the start of the 2013 crushing season, any attempts to recover the drawings will be on hold for many months to come.

Fortunately, most of the Bundaberg Fowler drawings had been copied by modellers in years past and exist in pdf form, while I was able to photograph most of the Bundaberg Jenbach drawings and correspondence. However, the survival of any of the correspondence files relating to the Bundaberg Fowlers must now be extremely doubtful, as would be the survival of the extensive sugar industry records of Walkers Ltd, most of which are believed to have been housed inside shipping containers on the site. A sad story highlighting the fragility of documentary records. I am very grateful that I got there 'just in time' to record much of the story of the Bundaberg Jenbach locomotives which otherwise would have gone untold.

John Browning

BHP Newcastle

Bill Pearce has sent through copies of pages from a booklet published by BHP in 1924 showing shunting operations on the wharf, at the Benzol plant, and a map of the steelworks.

Cooloola tramway – Possible heritage listing

Heritage officers from the Department of Environment and Heritage Protection (EHP) and rangers from the Queensland Parks and Wildlife Service (QPWS) surveyed the Cooloola Section of Great Sandy National Park in early December 2012 looking for remnants of the tramway and jetty. Local historian Dr Elaine Brown and other volunteers joined the search to help assess whether the remnants were of state heritage significance.

"What the recent survey found is exciting, but so far no sleepers or rails have been identified. Being cypress pine and spotted gum, they were subject to termites, fires and other natural forces so may not have survived."

More details can be found at:

<http://statements.qld.gov.au/Statement/2013/2/21/possible-heritage-listing-for-historic-coooloola-tramway>

From the Yahoo Group

More on tramways of the Mornington Peninsula

A few years back I researched the Shoreham Pier and found it was built in 1870. I have a couple of photos of it but there is no sign of a tramway. A couple of years ago at the Flinders and District Annual Meeting a local gave a talk on the early days of Shoreham, and circa 1860 there was a tramway on an early map with a mill on Stony Creek and jetty. Dromana had a tramway where

Latrobe Parade is, at the top end it runs into the walking track to Arthurs Seat. A short way up is where the gravel was quarried and a tramway constructed to Anthony's Nose - the old quarry is still there. The gravel was railed down- hill and tipped into the drays below. A Mr Allnutt was the contractor and had the contract for the road towards Sorrento.

Keith Holmes

My father dug out a copy of a Broadbents guide to the Mornington Peninsula from around the 1960's. It shows a quarry on Latrobe Parade above Anthony's Nose. As well, the current Bunurong Track (the 'back route' between Dromana and McCrae) is labelled as 'Quarry Road'.

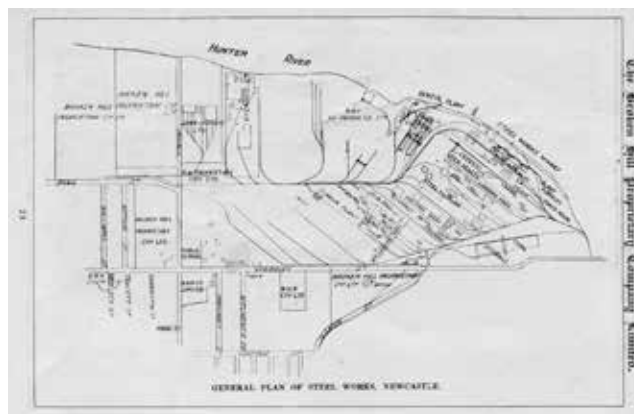
John Cleverdon



SHIPPING PRODUCTS FROM STEEL WORKS, NEWCASTLE.



BENZOL PLANT, NEWCASTLE.



GENERAL PLAN OF STEEL WORKS, NEWCASTLE.

Above: Three pages from a booklet published by BHP in 1924 show shunting operations on the wharf, shunting at the Benzol plant, and a map of the railway system at the Newcastle steelworks.

The Argus, 26 Feb 1924:

TENDERS Wanted for PURCHASE of No.4 CHAMPION CRUSHER, 8-horse Jelbart engine 70 chains of 14lb. Rails, with Trucks, Quarrying Tools and all Fittings on the plant with the right to crush 2000 c. yards of granite screening and metal.

Apply G.T. Allnutt Dromana

I am also looking for anything that may be known of tramways over Shoreham way.

Phil Rickard

Loxton Monorail

Way back in LR112 there was a report on the Loxton Farming Monorail, SA. The rebuilt remains of the Caillet monorail wagons used was shown at a museum there.

Has anyone been there recently? Does the museum and/or the wagon still exist?

I'm looking for a good photo of the wagon for a possible article in LR.

John Peterson

Fairlie locomotives in Australia

In response to a request for information on Fairlie locomotives in Australia, the following information was received:

Adrian Gunzburg's book *A History of W.A.G.R. Steam Locomotives* gives details of two classes of Fairlies in WA: The E class, 2-4-4-2T Double Fairlie. There were two in the class, built by Avonside in 1879 and out of service by 1896. One was sold to the Canning Jarrah Timber Company who used it on their line from Midland Junction to Canning Mills until February 1897 when it was withdrawn and presumably scrapped. The I class, 0-6-4T Single Fairlie. There were three of these, all purchased from the New Zealand Railways in 1891, where they had been the NZR S class. They were built by Avonside in 1880. They were withdrawn in 1900 and scrapped. In New Zealand the remaining four members of the S class gave good service until well into the 1920s. Queensland and WA were the only Australian colonies to use Fairlies. While the fate of the West Australian and Queensland locomotives is well documented, the story of a double Fairlie allegedly ordered for the NSWGR is more of a mystery.

According to Dr Robert Lee, in his book *Colonial Engineer – John Whitton 1819–1898 and the Building of Australia's Railways* a double Fairlie was ordered by

James Thomas Henry, Engineer for Existing Lines, for the New South Wales Railways to be used on the soon to be completed line over the Blue Mountains, in late 1867 or early 1868 when John Whitton was on leave in England.

The locomotive was built by the Fairlie Patent Engine Company, works number 20 in 1869. It was the first articulated locomotive delivered to the NSWGR and was named *MOUNTAINEER*. When it landed in Sydney, Whitton refused to accept it and it was shipped back to England, possibly without ever turning a wheel here. It was also sold to the Burry Port and Gwendreath Railway.

The story relies on an unreferenced story published 57 years ago, MA Park 'Fairlie Locomotives in Australia', *ARHS Bulletin* No.94 (August 1945). Park does not give a reference for this account, but possibly heard it from an elderly railway official. With so much research that has taken place since that time, both in the UK and Australia, it would have been expected some documentary evidence from the time to have surfaced.

It certainly seems plausible that the Blue Mountains line would have been an excellent place for Fairlie locomotives (if they worked properly) and it seems likely that Robert Fairlie would have tried to sell them to the NSWGR. Perhaps the real truth is that James Thomas Henry placed an order or at least expressed interest, and the locomotive was built with the Blue Mountains line in mind, but the order was never finalised and Fairlie had to find a new customer.

At first he found one in Sweden (as recorded in a previous post), but that fell through and he found a new customer in old South Wales. If the loco was sent to Australia it would almost certainly have been mentioned in the newspapers somewhere. Fairlie was big news, he was an expert in publicity. A brief search on Trove of Australian newspaper references to Fairlie between 1 Jan 1868 and 31 Dec 1870 and found about 140. Looking quickly through them there does not seem to be any reference to this incident.

Locomotive Magazine #208, 15 December 1909 contains an article titled: 'The Burry Port & Gwendraeth Valley Ry'.

*"The first locomotives were supplied by Thomas Hughes of Loughborough via the contractors who had built the line. These were 0-4-0STs Lizzie and Gwendraeth. The first had 2ft 9in coupled wheels, the second 3ft 9in. Gwendraeth became No. 2 in 1899 and was sold to Avonside in 1906. A Fairlie 0-4-4-0 Mountaineer (illustrated) was acquired *which had been intended for use in New South Wales*.*

This had 3ft 6in coupled wheels and four 10in x 18in cylinders. In 1877 it was tried on the GWR Pantyffynon to Rhos line."

The Fairlie Locomotive by Rowland AS Abbot (1970) version is that the locomotive was the first of two ordered by the Nassjo-Oscarshamn Railway in Sweden. After being completed in December 1869 it was sold to the Burry Port and Gwendraeth Valley Railway in South Wales. It apparently carried

a plate reading 'FAIRLIE ENGINE AND STEAM CARRIAGE CO. LONDON. 1870.'

I note that in Wiener's *Articulated Locomotives* (1930) it says that *MOUNTAINEER* was built in 1870 for NSW.

It is known *MOUNTAINEER* had a plate saying 1870, but Lowe in *British Steam Locomotive Builders* gives the building date as 1869.

Wiener also shows a horizontal section drawing of an 'old Fairlie locomotive' for the 'Nassjo & Osearshamn Railway' which he says was in Norway. In fact, Nässjö and Oscarshamn are both in Sweden. Incidentally, a 2004 report said that the boilers of both *MOUNTAINEER* and *VICTORIA* (the ex Queensland machine) had been discovered near the old Burry Port & Gwendreath Valley Railway in South Wales on which they both operated.

Any further information to clarify the history of this locomotive would be appreciated.

'Hunslet', 'Dopeydimwit', Michael Marczan, Bill Bolton, Frank Stamford & John Browning

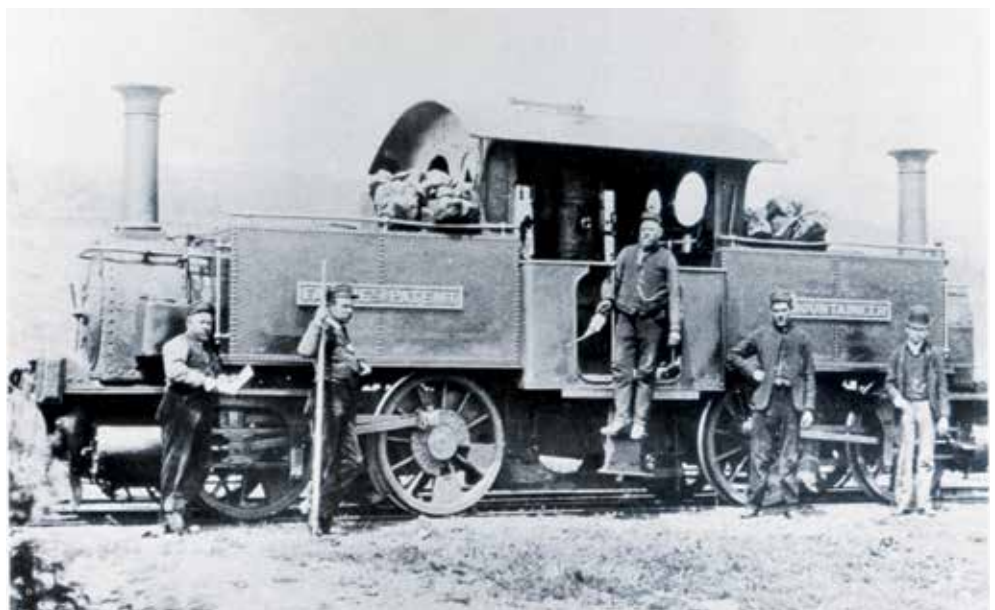
Nerang Central Sugar Mill

Peter Cokely has posted an impressive research project on the Nerang Central sugar mill directly to the Yahoo group as a message, with links to maps and images. It can be found at:

<http://au.groups.yahoo.com/group/LRRSA/message/6132>

To participate in these or other interesting discussions join the LRRSA Yahoo group at:

<http://au.groups.yahoo.com/group/LRRSA/>



MOUNTAINEER (Fairlie Patent Engine Company 20 of 1869) at work on the Barry Port and Gwendreath Railway in Wales, in 1890.
Photo: National Railway Museum Collection



Field Reports

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

Vivonne Bay Jetty, Kangaroo Island, SA (LR 142, 155, 200)

On a recent tour to Kangaroo island James Chuang photographed the jetty at Vivonne Bay. According to the article in LR 142, the jetty was originally constructed in 1910 to a length of 990 feet, and fitted with a 3ft 6in gauge tramway, then the article notes that in 1964 the length was a much shorter 180 feet, and without a tramway. It is unknown when the tramway was relaid, but the gauge is narrower, possibly 762mm. A single hand-pushed trolley similar to those in use at Cape Jaffa (LR 177 page 20) is at the shore end. James also saw the alignment of the former Kangaroo Island salt tramway (see LR 117), but didn't have time to check in detail. The tour guide said at one stage there was interest in buying it and running as a tourist operation as the tramway went past two lakes on the island, but nothing came of it.

James Chuang

Coal, Karmai and Cableways Tour – 24 & 25 November 2012

On the weekend of the 24th and 25th of November 2012, 25 members participated in the *Coal, Karmai and Cableways* tour to Korumburra, approximately two hours south east of Melbourne.

The weather was warm and a welcome contrast to the ordinary start we had on the Kerrisdale tour the year before. The members were very privileged to have Barry Sykes the local Korumburra historian as the guide on this tour. Barry was capably assisted by his wife Johanna who arranged the lunch stops and refreshments. The members met at the Coal Creek Historical Village and Barry provided us with an outline of the weekend tour. He also summarised the history of the area which revolved around the local black coal deposits, as well as various farming interests.

The Korumburra and nearby Jumbunna and Outtrim fields were private concerns, unlike the Wonthaggi field which was operated by the Victorian Government. The area was littered with small shafts as well as major mines and the full extent of these workings has been lost to time.

On our way to Jumbunna, Barry pointed out the broad gauge rail embankment which winds its



The jetty at Vivonne Bay on Kangaroo Island, 9 January 2013.

Photo: James Chuang



A view of the four-wheel trolley and track at the landward end of the jetty.

Photo: James Chuang

way through several farms parallel to the road. At the Jumbunna station site the members viewed significant embankments and wide track beds, as well as an obvious spur line to the aerial tramway terminus.

Next stop was Ken Rees's farm where Barry had kindly arranged access to the alignment of the former aerial tramway. As we visualised the tramway spanning several significant gullies, we were able to see inside a wedgetail eagles' nest perched in a tree down the hill. It contained two white chicks and one adult nesting, while the other adult kept watch nearby.

Across the valley the members could clearly see the rail embankment of the Outtrim extension which ran conveniently past the higher levels of the Jumbunna coal mine which ultimately led to the closure of the aerial tramway. Coal was then winched up an incline from the mine to coal bunkers on the rail alignment.

Dropping our cars closer to the mine, we inspected the hill top haulage foundations then the Jumbunna line embankment. The group walked along the

Outtrim extension to the Jumbunna coal sidings. Most of the members then headed steeply down to the valley floor where the mine was situated. Only the mullock heap, an occasional concrete foundation, rusty coal skip and two old boilers used as barrel drains in the creek, provide any indication of the substantial workings in this location.

The group then battled a steep climb in the hot sun back up to the formation and eventually the cars for a well earned rest and water stop. We then drove to the recently restored Jumbunna public hall for our lunch and a cuppa provided by Johanna.

The first stop after lunch was Mount Misery which provides a spectacular view of the Outtrim valley towards the south and the Outtrim embankment. The members drove across the embankment on Brian & Evonne Hess's property and stopped to inspect a local coal mine entrance. Some of the more adventurous members went inside the horizontal shaft which apparently went into the hillside over one kilometre.

We then walked along the right of way back to

Right: The members pose for the camera at the Coal Creek Historical Village, during the Coal, Karmai and Cableways tour, on 25 November 2012.
Photo: Barry Sheffield

the Outtrim road and inspected the deep cutting where the rail passed under the road but has subsequently been filled in. After Outtrim, the members went back to their respective lodgings in Korumburra to clean up and met at the Top Pub for dinner.

We all met back at the Coal Creek Auditorium at 8pm for a presentation by Bill Hanks on the various mines, railway lines and tramways in the Korumburra area, plus an overview of Jumbunna and Outtrim. After the presentation, the Coal Creek staff provided us with a wonderful supper. Next morning the members toured the Coal Creek Historical Village and sidings with Barry Sykes as guide. There are a many interesting historic exhibits at the village and I recommend visiting their website for more comprehensive information – see:

<http://www.coalcreekvillage.com.au/home/>

After visiting Coal Creek we said goodbye to Barry and Johanna and the members thanked them both for their wonderful support. We then headed back to Korumburra for lunch.

After lunch we met at the Korumburra railway station for a train trip to Nyora and return on the South Gippsland Tourist Railway's ex SAR Red Hen 402. The railway also has many interesting exhibits and photographs in their museum at the station. Again I recommend visiting their website for more comprehensive information.

<http://www.sgr.org.au/index.html>

The train trip was quite spectacular and we travelled through lush and undulating countryside typical of south Gippsland. We had a photo opportunity at Nyora which is approximately 22km from Korumburra. The train trip finished around 4pm and the members drove back to Melbourne and their respective homes.

I would like to thank Scott Gould and Bill Hanks for arranging another memorable tour. I would also like to specially thank Barry Sykes and his wife Johanna who provided their local knowledge and a detailed line-side guide that made this tour so memorable. And thanks to Ken Rees and Brian & Evonne Hess for access to their properties.

Simon Moorhead

Starvation Creek Tramway, East Warburton Vic (LR 85)

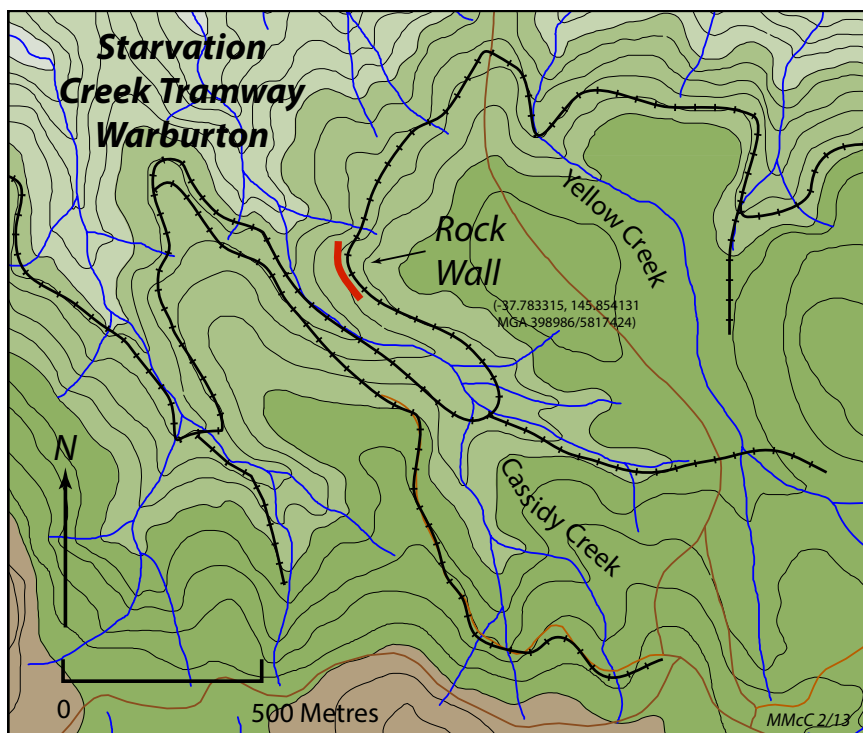
During February, Keith Maplestone, a forester with Vicforests, came across a rock structure while doing a survey for a potential logging coupe near Warburton. The rocks had been used to raise the tramway up over a rock shelf. It is located about 450m down a spur off Road 5s off Big Creek Rd at MGA reference 398986/5817424 or -37.783315, 145.854131

The tramway was part of the Starvation Creek tramway built in 1921 jointly by Richards, The Federal Timber Co. and Ezard and operated until 1935. (See *Mountains of Ash*, Mike McCarthy 2001)
Colin Harvey Vicforests



Rock structure on the former Starvation Creek Tramway, East Warburton.

Photo: Keith Maplestone



Murrundindi Tramway

A recent visit to the former Murrundindi tramway, 100km north east of Melbourne, showed that facilities existing before the 2009 bush fires have now been restored, and regrowth is returning the area to its former glory. The three foot (910mm) gauge iron-railed tramway was constructed in 1920 for sixteen miles (26 km) along the valley of the Murrundindi River south of Yea to access timber resources from the Black Range. At its peak in the mid 1930s, 2.5 million super feet of timber per year was being railed via way of Cheviot, on the Tallarook-Alexandra/Mansfield VR line.

The valley road adjoining the tramway was upgraded to all-weather use in 1935, and the Murrundindi tramway went out of use shortly thereafter. The 1939 Black Friday bush fires prompted the removal of small sawmills from forest areas.

The rails were removed and the tramway returned to nature for over forty years. However,

in 1984, crews creating a walking track in the Murrundindi valley re-discovered the tramway right of way, of which 2 km was incorporated into the new route.

One of the major Black Saturday fire outbreaks in February 2009 started near the former Murrundindi sawmill. The fire devastated the valley, destroying all picnic facilities, bridges and many features of the walking tracks. Access to the area was restricted for the rest of the year. Four years later, picnic and camping areas have now been re-constructed and the valley is fully open to walkers again.

The former Murrundindi tramway is accessible from the Bull Creek Road, just south of the Bull Creek picnic and camping area, 4 km south of the main Suspension Bridge camp site, in turn 8 km from Devlins Bridge on the Melba Highway. Today's walking track varies slightly in course from the tramway right of way, for example where trestle bridges were destroyed in 1939.

Two bridges, one over the Murrundindi River, a

second over a side creek, have been replaced in steel, rather than timber as was previously used. Some evidence of the former tramway failed to survive the fires, only a few embedded sleepers are now visible.

However, two substantial tramway cuttings and sections of the formation remain in good order. The Department of Sustainability & Environment salvaged two former log bogies and has now replaced them with a log in situ beside the walking track.

East of the Murrundindi River, the remains of Tratford Mill, constructed in 1925, survive largely intact. The excavation for the mill boiler is still visible, and the sizable sawdust heap, though somewhat blackened, is still in situ.

After the 2009 fires, other sections of the former tramway were visible further down the valley, but did not co-incide with today's walking track. These have since been allowed, once again, to return to nature.

Ray Peace



Murrundindi Tramway Clockwise, from top left:

- The walking track bridge at Murrundindi, June 2008.
- The same location in July 2009.
- The saw log and bogies back in position, January 2013.

All photos: Ray Peace



Heritage & Tourist NEWS

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

QUEENSLAND

ATHERTON-HERBERTON HISTORIC RAILWAY INC, Atherton & Herberton

1067mm gauge

A change of name from Atherton Tableland Railway Inc occurred in late 2012.

A visit on 14 November 2012 revealed ex-Illawarra (NSW) district underground equipment still present in disused condition including at Atherton:

C	4wBE	AE Goodwin		ex South Bulli Colliery
		(rebuilt Electrical Mining Engineering 11267)		
111	4wDHR	Vernier	1977	ex Wongawilli Colliery
119	4wDHR	Vernier	1981	ex Wongawilli Colliery

and at Herberton:

46	4wDHR	Fox 302	1971	ex Nebo Colliery
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Scott Jesser 11/12

AUSTRALIAN SUGAR CANE RAILWAY, Botanic Gardens, North Bundaberg

610mm gauge

The unprecedented flooding in Bundaberg in late January had a ruinous effect on the Botanic Gardens Railway. The flood of 2011 came through the shed at somewhere around 300mm in depth and caused very serious damage to the Gardens running track. The official height of this flood was 1.6m higher, well beyond the figure suggested by initial warnings and for which preparations had been made. Following the flood, an initial inspection on 31 January showed that the training room and station had been extensively damaged and a substantial ballast wagon parked in front of the shed was flipped over by the force of the waters. Everything in the training room – records, photographs, training equipment, library and computer – was lost. The loco shed was swamped with much loss of records and damage to tools and equipment, and large amounts of stinking mud and sand were deposited over everything. The ticket office was flooded to the roof. All the loco coal and firewood was washed away. The extensive damage to track, including the recently-completed extension, remains to be fully assessed.

The water was almost up to the top of the cab windows of EM Baldwin 0-4-ODH *VALDORA* (6/1258.1 6.65 of 1965) but not quite high enough to get into the exhaust stack with the big air filters keeping out most of the mud and silt. Fortunately, the boiler of Bundaberg Fowler number 3 (0-4-2T BF 3 of 1952) had been taken to a workshop off-site and escaped the flooding. As a result of this, its retubing was able to be completed at the same time as a recovery crew was working in the flood zone.

Up to 15 volunteer members worked very hard, initially every day except Sunday, cleaning up and working towards recovery. Work parties are

now scheduled for every Tuesday, Thursday and Saturday.

An early job was to thoroughly clean and service *VALDORA* under the direction of head mechanic Charlie Leslie so that other locomotives and rolling stock could be removed from the shed. This was achieved on 21 February with Orenstein & Koppel 0-4-0T *GERMANY* (6805 of 1914) and Fowler 0-6-2T *INVICTA* (11277 of 1907) shunted into the open. Visiting fire crews proved very helpful indeed in hosing down the locomotives and washing mud out of the shed. Mud and water has to be flushed out of the cylinders and valve chests and all lubrication points greased. The following day, enough track repair work had been done to give *VALDORA* access to the restoration line in the shed and pull out the chassis of number 3 for similar treatment. Over the next few days, Bundaberg Foundry 0-6-2T 1 of 1952 was expected to receive attention and the remainder of the shed cleared with help from visiting 'fireys'.

The February weather conditions were appalling with 35 degree heat and 100 percent humidity, not to mention the awful smell of the mud. To make matters worse a colony of flying foxes temporarily moved in over the depot compound with the resulting excrement everywhere and snakes were slithering inside the shed looking for shelter.

One positive is that plans previously made for contractors to extend the track maintenance shed were put into action and they are also repairing the existing shed. Also some work manually digging silt from between the rails has been undertaken by correctional workers.

The depot site in the Botanic Gardens is still classed as an official exclusion zone and will be for some time. Strict hygiene precautions have been put in place to minimise the risk of contamination and disease.



The mud-caked frames of Bundaberg Fowler 0-4-2T number 3 at the Australian Sugar Cane Railway, Bundaberg, in the aftermath of the January flood. At left of picture, volunteers are bailing water out of the smokebox saddle. Fortunately, the locomotive's boiler was off-site undergoing repairs. Photo: Ross Driver

The damage bill totalling hundreds of thousands of dollars is not covered by insurance and some consideration is being given to whether it is possible for the training room and workshop facilities to be moved to a higher position in the Gardens site.

Anyone wishing to make a donation to assist with recovery is asked to contact The Secretary at PO Box 7209, Bundaberg North 4670, or e-mail secretaryascr@yahoo.com.au

Ross & Wendy Driver 2/13;

<http://magsq.wordpress.com/>;

<http://www.abc.net.au/local/photos/2013/02/25/3697568.htm?site=&xml=3697568-mediars.xml#bigpicturepos>

BEENLEIGH HISTORICAL VILLAGE & MUSEUM INC

610mm gauge

John Fowler 0-4-0WT 16249 of 1925 has been moved from Rocky Point Sugar Mill to open display, and was first noted here on 9 February. Peter Gough 2/13

DREAMWORLD PRODUCTIONS PTY LTD, Coomera

610mm gauge

Baldwin 4-6-0 45215 of 1917 recently re-entered service here following a lengthy overhaul, allowing Perry 0-6-2T 5643.51.1 of 1951 to be relieved of regular duties on the passenger train. Some speculation about introducing an Italian-built steam outline locomotive here by mid-2013 in an attempt to reduce costs has followed a report in the January-February issue of British magazine *Narrow Gauge World*. However, no confirmation of this possibility has been obtained either locally or from overseas. Bob Gough 2/13; John Browning 2/13

CAIRNS

A website entrepreneur has proposed that Shields Street in the heart of Cairns have a tourist railway operated by a cane train running between the Esplanade and Cairns Central shopping centre. The proposal received some strong comments on a public forum.

An article in *The Cairns Post* said that Nick Bradt, the developer of an online shopping site and an Ergon Energy supply chain manager, is proposing the cane train as Cairns Regional Council consults the public on the redevelopment of City Place. The council and the State Government are keen on opening up City Place to traffic, while others want the mall retained with a water feature as its centrepiece.

Mr Bradt said debate on the issue was an opportunity to create something special for Cairns. He said City Place should be retained, with Shields Street closed from Cairns Central (McLeod Street) to the Esplanade.

"Turn Shields Street into a shopping mall and make it possible to walk dry footed from Cairns Central to the Esplanade and call it Cairns Citynade," he said.

Mr Bradt said McLeod, Sheridan, Grafton and Abbott streets could remain open to traffic and three free sugar cane trains could run between



A scene of devastation in the depot yard at the Australian Sugar Cane Railway, Bundaberg, on Friday 1 February 2013.
Photo: Ross Driver



Former Rocky Point Sugar Mill Fowler 0-4-0WT 16249 of 1925 on display at Beenleigh Historical Village, on 28 February 2013.
Photo: Bob Gough



SUGAR CANE TRAIN No.4 (Ruston & Hornsby 379072 of 1954, rebuilt EM Baldwin 7807.1 11.77 of 1977) and its train pass the animal farm at The Big Pineapple on 1 December 2012. Photo: Brian Webber

the shopping centre and the Esplanade. "With the sugar trains driving people up and down Shields Street, Cairns would make a great connection to its history and present economy as sugar cane country," he said.

Cairns Post, Nick Dalton, 12/1/13

BIG PINEAPPLE CORP PTY LTD

Forest Glen

610 mm gauge

There have been some train rides run as a business by a business without pretensions of rail enthusiasm or preservation. They usually don't have the advantage of volunteer labour or the ability to apply for grants from government. However they can have the advantage of having employees who act on the instruction of management rather than volunteers who may be interested in promoting their favorite project with no particular completion date, regardless of whether it is in the best financial interest of the business.

The BIG PINEAPPLE attraction on Queensland's Sunshine State is a retail venue and market. It is situated at Woombye, a few kilometres south of the significant town of Nambour and just off the Bruce Highway. It is between 20km and 50km from the seaside holiday resorts and coastal residential areas. To help draw visitors to the attraction and away from the competing retail shopping centres, the original owners of the BIG PINEAPPLE attraction decided to have a pineapple farm, farm animals and train ride to encourage family groups, particularly holidaying people, to visit.

Whilst admission to the BIG PINEAPPLE attraction is free, there is a payment required for the train ride and animal activities.

In 1970, the Taylor family purchased a disused pineapple farm and opened the attraction under the name of SUNSHINE PLANTATION. The help of the Moreton Mill staff was obtained and a 610mm gauge circular railway was constructed in a difficult location on the side of a hill. The resultant grades are very challenging though the train operates at little more than walking pace as passengers listen to the commentary and observe the view.

The attraction opened on 15 August 1971 and was soon very popular as it had plenty of parking, fresh fruit and vegetable sales, and the public referred to it as the BIG PINEAPPLE after a 16 metre high fruit visible from the passing major road.

Business prospered for 25 years with the train ride carrying many passengers. The two trains were an important part of a visit and along with the animals, differentiated the PLANTATION from other regional shopping centres. However, over time the patronage declined and the business model of charging rentals to the stall holders became problematic. A competing market at Eumundi, north of Nambour, provided a larger area and variety of stalls and the SUNSHINE PLANTATION business found itself in receivership in 2010. The trains were locked up as part of the business closure.

In September 2011, the land was purchased by new investors who have repaired and revitalized

all aspects of the site and business and the re-opening took place on 20 April 2012. The train ride had to pass present day certification hurdles, but it resumed with one train in July 2012.

When visited in December last, the train was doing good business with a driver and a ticket-seller employed and mechanical requirements being done by a contractor. Locomotive 4, the green one, was officiating while loco 5, the yellow one, was awaiting return to service.

John Browning advises that *SUGAR CANE TRAIN No.4* was originally built by Ruston & Hornsby in England (379072 of 1954) to 2ft 8½in gauge (826mm) as a Model 48DLG 4wDM flameproof loco for working underground at Berrima Colliery (NSW). It was sold in 1968 following the closure of the colliery. It was rebuilt by EM Baldwin as a 4wDH in 1977 (7807.1 11.77) for use at the Big Pineapple.

Likewise, *SUGAR CANE TRAIN No.5* was originally built by Ruston & Hornsby in England (398072 of 1957) to 2ft 8½in gauge (826mm) as a Model 48DLG 4wDM flameproof loco for working underground at Berrima Colliery (NSW). It was also sold in 1968 following the closure of the colliery, and was rebuilt by EM Baldwin as a 4wDH in 1978 (8350.1 12.78) for use at the Big Pineapple.

Brian Webber 1/13

Nambour & District Historical Museum

610 mm gauge

Work on the preservation of the former Moreton Mill and Maroochy Shire 'Shay' locomotive [amalgam 2091 of 1908 and 2800 of 1914] is steadily progressing. Just prior to Christmas a major milestone was achieved with the fitting of the new smoke box and refitting the chimney. Presently new cab sides are being fabricated while work continues on loosening all rusted, seized and welded-up mechanical components. The water tank will also need a floor fitted as during a previous 'preservation' effort someone must have decided that if it couldn't be seen it wasn't necessary. It is hoped to have the 'Shay' structurally complete and undercoated prior to the Nambour Museum's *Revisiting the Moreton Mill* open day on 30 November this year to mark the 10th anniversary of the mill's closure.

Clive Plater 3/13

DURUNDUR RAILWAY

Woodford

610 mm gauge

President Terry Olsson reports some "not so good" news. During the last few months of 2012, passenger numbers really dropped off. The tough economic times really stared to hit home, which combined with the lack of an operational steam locomotive, has resulted in an overall drop in passenger numbers of 25% for 2012 compared to 2011. This in turn has meant income from sales on site was also down 30% on last year, with overall income from running days down 26%. ANGRMS are not alone in this, with other heritage railways and local businesses also reporting drops in income. Unfortunately the predictions for 2013 do not forecast much improvement.

Heritage & Tourist NEWS

Less income means we all need to tighten belts and review spending. There cannot and will not be any reduction of spending on safety related issues such as track and rolling stock maintenance, but there is a need to look seriously at other expenses. More tasks can be done inhouse (where there's the capability). Efforts can be made to increase the level of sponsorship, donations, grants or simply to pay a reduced price for things.

There was, however, some better news. Every year ANGRMS is audited by Queensland Transport, and this year the audit focussed on track and its maintenance processes. ANGRMS not only passed the audit, but there are no actions as a result of the audit. In December the railway also had its independent track inspection which only identified two minor issues, which despite having a six month time frame to correct, were fixed the same afternoon.

A big problem facing ANGRMS, along with other heritage railways, is a shortage of volunteers.

Meanwhile, while the DTMR audit found the track to be in sound condition with appropriate systems in place for its maintenance, the railway has had a concentrated effort on sleeper replacements in recent months. Workers reached a 'landmark' day for track maintenance at Woodford when they installed the first prestressed concrete sleeper on 60lb/yd rail in the mainline. It was a learning experience to make sure enough ballast was dug out to get the sleeper in since they can't be belted into position with sledge hammers, like timber sleepers! The section of mainline between the Compound and Workshop points is the most heavily trafficked section – all passenger and work trains and most shunting movements use it – and since it is on a curve, it is the best place to use the concrete sleepers. Negotiations are underway to secure supplies of prestressed concrete or steel sleepers to reduce long term maintenance requirements.

Durundur Railway Bulletin Volume 34 Number 319 January/February 2013

NEW SOUTH WALES

SCENIC WORLD

Katoomba

1220mm gauge

Anthea Hammon is overseeing a \$30 million upgrade of the Scenic Railway, one of the world's steepest, with a slope of 52 degrees, located at Scenic World in the Blue Mountains. The railway upgrade includes a new hand-built train designed by Swiss firm Garaventa, refurbished 310 metre track through tunnel and a rainforest corridor, and expanded platforms with historical information panels. The new train will be hauled by a winch with two fully redundant 560W AC motors.

The new train will be the fifth since 1945, when the former coal railway was converted into a tourist attraction. Anthea Hammon said: "Garaventa has never built any carriages like ours before. They were made to reflect the old train and the history of the site, but also they needed to comply with all the modern standards. One of the project's main challenges is minimizing the shut-down periods for the attraction. The existing train still takes tourists while civil works are underway on both sides of the track. The train is also being used to replace the track.

"We have three special trolleys that we hang on the front of the existing train. Garaventa rip out a piece of the track down the line. Then they put a piece of track on the trolley, drive the train down to where the track finishes and then using a little winch system, the winch the new piece of track into place. Then they have to demolish the next section, come up, get the track and go down. It's nearly like you are building back in 1880 when you first built the train, because there is literally no other way to build things on a 52 degree slope."

The new train is scheduled to open at Easter. There is a gallery of pictures of the construction work on the official website www.scenicworld.com.au Civil Engineers Australia, 2/2013 via John Browning

RICHMOND VALE RAILWAY

Richmond Vale Preservation Co-operative Society

1435 mm gauge

Work is continuing on former John Lysaght 0-4-OST *KATHLEEN* (Avonside 1862 of 1921). For the first time in over 40 years *KATHLEEN* has water in the boiler and had its first hydrostatic test to 80psi. Several very minor leaks were revealed. Work is progressing on the bunker with a new complete section now welded to the base. New fire bars and brake shoes have been ordered and will be arriving shortly.

Graham Black 1/13

ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY LTD, Albion Park

610 mm gauge

The EM Baldwin diesel locomotive Macknade number 17 (ex Condong Mill [NSW] number 2) arrived at its new home at the ILRMS on 4 February, 2013. The locomotive, kindly made available by CSR after it had been standing redundant at the Macknade Mill, left for its new site on Friday 1 February.

After its long journey it was offloaded at Albion Park. Members' arrival on the following Tuesday for the work day saw a team get together and look over the loco and all is in good shape considering. The motor turns, the oil is clean, the brakes were free and it moved freely. It was placed over the service pit on road two in the loco shed and all is not doom and gloom. There are a couple of things to source locally but the team is quite happy.

Members had first sighted the loco in 2007 whilst on a sleeper retrieval drive at the Victoria Mill. It was complete other than needing tyre works to one of the wheels. At the time



The new track under construction at Scenic World, Katoomba. Photo: Courtesy Scenic World

enquiries were made to CSR that if the loco became available, ILRMS would be interested, but CSR had decided to keep the loco for a use as a possible conversion to a brake wagon. On the sleeper retrieval in 2011, members had learned that the loco was still at Macknade Mill. Throughout 2012 Tony Madden held discussions with CSR and the result was that the locomotive was donated. Thanks go to CSR for this, as the loco can be preserved and restored at Albion Park. ILRMS has also applied for grant funding and has been successful with one application receiving \$2800 of funding for volunteer groups from the federal government. Still awaited are the results, that will be revealed in March, of the \$15,000 applied for via the Community Partnerships Program. If successful, this will see new kitchens for the crib room and dining car. The funding will also go towards carpentry work and plumbing work as needed on both projects. Throughout January all of the boilers were down for their annual inspections so diesels, such as the Baguley/Drewry 0-6-ODH *SEYMOUR*, were used. Chris Hart 1/13, Brad Johns 2/13.

TIMBERTOWN, Wauchope

610 mm gauge

A *Day out with Thomas* event staged on 9 and 10 March proved to be a great success. In light of this, another *Thomas* event will take place on the weekend of 26-27 October.

Timbertown's next major event will be the annual Timbertown Steam Festival, held on the 5-7 July.

David & Alison Waite, Park Custodians, Timbertown 2/13

LITHGOW STATE MINE MUSEUM

1435 mm gauge

President Ray Christison reports that this year the principal focus has been set on the twin tasks of developing a threatrette and upgrading the Bath House to comply with regulations



Almost down. The Boom Logistics dogman checks that the wheels are on the rails as EM Baldwin 0-4-ODH Macknade 17 (6-1446-1-9-65 of 1965) arrives at Albion Park on 4 February. Photo: John Garaty

covering places of public entertainment. Works are progressing on both projects with the theatre and Spectravision expected to be operational by March 2013. There have also been other exciting developments throughout the year.

Members have been continuing development of the theatre, which is now carpeted and air-conditioned. It is waiting for installation of the Spectravision cabinet and stepped seating.

Work is continuing on the modification of the Bath House toilets. A former ambulance room at the back of the Bath House is being converted into a commercial standard food preparation area. This project will greatly enhance capability to host public events. Biogas Energy has donated \$1000 to assist with the cost of the conversion. The State Mine site has continued to grow in popularity as a venue for a range of activities. During 2012–2013 the organisation hosted one wedding, Christmas parties, re-enactment groups and various training activities. During 2012–2013 the museum has hosted a range of photographic shoots including weddings and fashion.

The museum has recently been offered funding from Museums and Galleries NSW and from the Western District Deputies' Association to assist with the development of new interpretations in the museum. Plans include a major display featuring artifacts, story boards and multimedia presentations telling the story of changes in coal mining methods over 100 years.

The museum is currently working on two new mining histories with publication anticipated in 2013. Xstrata Coal is funding the publication of a full colour history of Baal Bone Colliery. This book will include histories of Ben Bullen and Wallerawang Collieries, and a brief history of the Wolgan Experimental Colliery of the 1970s. In a separate project Ray Christison has teamed with Bill Marshall of Orange to upgrade and republish his book *Memories of Irondale*. This book will provide insights into the Irondale, Boldon and Main Range Collieries, as well as the community that developed around these workings.

Ray Christison (via Bob McKillop). 2/13

VICTORIA

ALEXANDRA TIMBER TRAMWAY

Alexandra Timber Tramway and Museum Inc.
610 mm gauge

Malcolm Moore GT-112-DH-1 has finally arrived in Alexandra. After months of delays caused by wet weather in Queensland and then the discovery that the locomotive was so tall that a special float would be required for its transport, the locomotive was successfully loaded by M&L Mina Transport in Ingham on Monday 10 December 2012 and set-off on its journey to Victoria. On Monday 17 December it arrived in Alexandra and, with assistance from Bryan Slader and Gerry Laws, was successfully unloaded onto ATT rails almost exactly six months after its purchase from Chris Hart on 16 June.

This locomotive is physically the largest at Alexandra, and dwarfs even the Kelly & Lewis locomotives. Kelly & Lewis 5957 and Simplex

10058 were used to position the locomotive on the No.3 road. On Friday 28 December a small team gathered to assess the condition of the Malcolm Moore locomotive. While the condition of the engine still remains unknown at present, there is nothing to stop this locomotive being cosmetically restored and it certainly rolls on its wheels easily enough. A report has been forwarded to The Department of the Prime Minister and Cabinet (Office for the Arts) acquitting the grant from the National Cultural Heritage Fund. This fund provided the funds to purchase and transport of the locomotive (including crane hire). This locomotive has cost the ATT the princely sum of \$132 for a slight cost overrun for crane hire in Alexandra. The ATT's contribution of \$3000 in materials and labour for cosmetic restoration and \$3000 in materials and labour for shedding can now commence.

Timberline 129, February 2013

WALHALLA GOLDFIELDS RAILWAY

Walhalla

762 mm gauge

Rail stored along the walking trail between Erica and Thomson for future use in the restoration of the line between Thomson and Erica has been lent to PBR so there is no delay to the Menzies Creek museum project. PBR will return the same quantity of rail when needed for the restoration to Erica.

Meanwhile the WGR is to receive surplus rail materials reclaimed from the dismantling of the of the former Wahgunyah broad gauge railway beyond Rutherglen. Although intended for use in the now-abandoned Wahgunyah Beach Tramway project and with some earmarked to restore parts of the line back to Springhurst, the now-surplus rail, steel sleepers and fittings are to be used at the WGR and at Daylesford Spa Country Railway.

The materials for the WGR include 75lb track still in place in the Wahgunyah station yard and a kilometre or so of line re-gauged by MCR to 610mm as part of its tramway program.

At Wahgunyah, whilst the railway line has been lost, active local interest will now see the importance of the original colonial railway, recognized through interpretive signage and placement of static infrastructure and exhibits, as part of both a community and tourism initiative and as a supplement to the rail trail now occupying the original formation.

WGR Facebook page and Dave Moyle, Big Tree Country Management Services, Wahgunyah 2/13

LAKE GOLDSMITH STEAM PRESERVATION ASSOCIATION

1435mm gauge

The 100th Rally, on 3-5 November 2012, saw the return to operation of the 65-ton 1¼ yard bucket Bucyrus steam shovel supplied to Mount Morgan Mines in Queensland in 1903. In 1908 it was rented to the Rockhampton Harbour Board and in 1923 it was transported to Brisbane for use on a sewerage construction project. Following this, it was sold to Australian Portland Cement Ltd for use at the Batesford quarry near Geelong. Withdrawn from regular

use requiring firebox repairs, the dipper and bucket were removed and it was occasionally operated as a crane on compressed air up to the 1960s. Saved from scrapping, it sat opposite the office for many years. Heritage listed, a permit was issued in late 2009 for its removal to Lake Goldsmith. With financial assistance from the McCann family, major boiler repairs were undertaken, including remedial work to the firebox crack. A replacement dipper and bucket had to be manufactured and were fitted with only hours to spare before the commencement of the November rally at which it was a major crowd-puller.

http://vhd.heritage.vic.gov.au/places/result_detail/11125; *Weekly Times* 11/12

SOUTH AUSTRALIA

COBDOGLA IRRIGATION AND STEAM MUSEUM

Cobdogla Steam Friends Society Inc.

610 mm gauge

The Cobdogla Irrigation & Steam Museum railway is back in full operation after the demolition of the 100 year old concrete water tower on 1 November. In February 2012, several 20kg lumps of concrete fell from the base of the tank due to spalling of the concrete. The tank was immediately fenced off to enable operations to continue while the fate of the tank was decided. An inspection of the structure confirmed the concrete had deteriorated to such an extent that the only safe option was to demolish the tank. The water tank was located adjacent to the railway track and station.

The initial plan was to use a nibbler on the end of an excavator boom to chew the concrete down. However, as soon as the excavator operator touched the tank, the whole structure wobbled in such a manner, that the excavator operator immediately decided to suspend work. An engineer was called in to devise a plan to safely demolish the tank. One result of his report was that the area enclosed by the safety fence around the tank was greatly enlarged to include the railway station and part of the track. This restricted the amount of track available for operations to about 300 metres and the loco sheds.

One result from this was the cancellation of several open days as the Humphrey Pump was also out of action. The Halloween Twilight Trains were run and were quite successful despite the small amount of track available.

Since the demolition of the tank (which can be seen on You-Tube Cobdogla Water Tower Demolition), and a cleanup of weeds along the track, normal running and tours have resumed. Diesel trains are usually available on Sundays or by prior arrangement. The Humphrey Pump, however, will not be run again until gas ventilation problems are resolved.

The Simplex loco *Peter* 9851 is out of operation again. Problems with the injectors of the original Dorman engine prompted the fitting of the spare engine. However, this was not in a good condition either with water pump, timing, gear brake and clutch problems and a suspected "cooking" of the rings due insufficient cooling water circulation. The engine has been removed again for further work. Due to the closure of the railway, the Bagnall 0-4-OST has not been steamed since Easter last year. The scheduled steaming days are March 10 and 31, April 21, June 9 and October 6. In the meantime, a boiler inspection is scheduled for February. A set of 30-pound points has been fabricated and installed adjacent to the three-way point set and a new track laid alongside the loco shed. The west wall of the loco shed is being shifted to enclose the new track and a lean-to roof built over the track. This extension of the loco shed will enable several items of track maintenance equipment to be housed under cover. Work is expected to be completed around the middle of March.

Denis Wasley, 2/13



Tim Fisher and the man behind the Golden Mile Loophline restoration, Mike Lucas, pose in front of ex-WAGR Com-Eng 0-6-ODH B1610 of 1960 at Kalgoorlie on Saturday 16 February. Photo: James Waterhouse

TASMANIA

WEST COAST WILDERNESS RAILWAY

Queenstown

1067mm gauge

The search was on, as we went to press, to find a new operator for the West Coast Wilderness Railway, after current operators the Federal Group announced in February it was pulling out.

The Federal Group said it would cease operating the Abt railway on April 30 as it was no longer viable and needed major repairs.

The Federal Government has since committed \$6 million to repair the railway. The State Government has promised up to \$1.5 million a year for four years to underwrite the operation.

As we went to press the future of the railway was uncertain as a new operator had not yet been confirmed.

TasRail has suggested it would be interested in a partnership but is currently tied up fixing the island state's freight railway infrastructure.

The government announcements have been welcomed locally and the entire issue has raised a lot of comments on public forums, both in Tasmania, and on railway-themed websites.

Federal Group spokesman Daniel Hanna told the ABC on 4 February there were two main reasons for the pullout. "There was a critical need to invest in infrastructure and the second, of course, has been reduced demand and a downturn in visitor numbers and passenger numbers," he said. Mr Hanna said five years ago the railway carried 45,000 passengers but in the past year the figure had dropped to just over 30,000.

About 48 workers risk losing their jobs.

Mr Hanna said damage from a severe thunderstorm and a landslip in the past two years had added to escalating maintenance costs. The Federal Group was halfway through a lease with the State Government which owns the track and locomotives.

The Examiner reported on 25 February 25, 2013, that the Federal Government had committed \$6 million to cover the urgent repairs. It said Labor Braddon member Sid Sidebottom and federal Transport minister Anthony Albanese announced the deal at Queenstown the day before. Mr Albanese said the federal funding was subject to the State Government finding an operator for the heritage railway, and committing to cover the \$2 million in annual maintenance costs for four years. The State Government has previously said it would help cover maintenance costs.

ABC Country Hour (25/2/2013) reported that Tasmanian steam train enthusiasts were looking to other successful tourist train models like Puffing Billy in Melbourne to reopen the West Coast Wilderness Railway. It said it was widely agreed that any new operator would need the support of a volunteer network like all other tourists railways in Australia.

The ABC reported on 25 February the government money would not entice the Federal Group to continue running the railway. Mr Hanna said the company would help the Government find any potential new operator. "We believe that as a private sector operator we're not the best operator for this railway going forward," he said. "We've given it 10 or 11 years and tried our best. We think that the Federal and State Government announcements will go a long way towards helping find a new operator and we'll do whatever we can to support the transition to that new operator. We also have a lot of key staff, we want to work with the State Government to keep all of those things together and hopefully those combined with the state and federal government financial commitments will help find a new operator for the railway because we still think it's a great asset for the West Coast and indeed Tasmania."

The Tasmanian government has had interest both locally and international operators. Infrastructure Minister David O'Byrne has told ABC Local Radio he has been in informal discussions with potential operators.

"There's been no formal expressions of interest but since the news broke that Federal Hotels would not continue beyond April 30, a number of parties have contacted us from various parts of Tasmania and I must admit from various parts of the world saying what's the situation, what is the capital expense."

Mr O'Byrne says a consortium of local businesses may end up providing a marketing and ticketing role for the new rail operator. West Coast mayor Darryl Gerrity also warned that regardless of who operates the railway, visitors have high expectations.

"One of the things we do want in an operator, Federal have set a high standard of excellence and we don't want that standard lowered with a new operator," he said. "There's a standard there that the tourists now enjoy and they have a great wilderness railway experience."

All tourist and heritage fans await further developments. More in our next edition.

Compiled from reports on ABC News, *The Mercury*, *The Examiner* 2/13



FC Hibberd 0-4-ODM 2011 of 1937 on display at Miners Hall of Fame, March 2008. Photo: Alf Atkin

WESTERN AUSTRALIA

GOLDEN MILE LOOPLINE RAILWAY.

Kalgoorlie

1067 mm gauge

While in Kalgoorlie for the centenary celebrations of the Trans Australia Line, which included a dinner in the restored and historic Boulder Town Hall on Saturday 16 February, Hon. Tim Fischer, the former Deputy Prime Minister, inspected the Golden Mile Loophline Railway's locomotives, including the Planet loco, FC Hibberd 0-4-ODM 2011 of 1937 2ft gauge, which was ordered by New Consolidated Goldfields Ltd, London for Lake View & Star Ltd, Australia. This machine had been on open display in Kalgoorlie for many years and has been rescued from what was most recently the Australian Prospectors & Miners Hall of Fame.

James Waterhouse via John Browning 2/13

NATIONAL

New rules apply for people who perform safeworking duties on tourist and heritage railways. The National Transport Commission's new medical standard for Rail Safety Workers comes into effect across Australia from January 2013. Many aspects of the new standard are similar to the guidelines which have been in use since 2004; two areas have changed significantly. The following changes apply to both RSW 1 and RSW 2 workers, which account for most volunteers in the tourist and heritage sector.

Diabetes – all workers who take medication for diabetes (tablets or insulin injections) will need a clearance letter from a treating specialist in diabetes.

Sleep apnoea – workers will now have their Body Mass Index (BMI) measured. Those with a BMI of more than 40 will be referred for a sleep

study. People with a BMI of 35-40 may also be referred for a sleep study. If sleep apnoea is confirmed, they will be deemed unfit for rail safety work.

Some volunteers might temporarily be unavailable while the new requirements are processed.

The Victorian Transport Tourist and Heritage Rail eNews, 11/ 12.

OVERSEAS

STATFOLD BARN RAILWAY, Tamworth, England

610mm gauge

Ex Lautoka Mill Hudswell Clarke 0-4-OST 19 (1056 of 1914) saw its first test outing in steam in mid-February following its restoration. Ex Lautoka Mill Hudswell Clarke 0-6-0 11 (972 of 1912) is being worked on but this will be a long and expensive project.

Henry Noon 2/13

BLENHEIM RIVERSIDE RAILWAY, Blenheim, New Zealand

610mm gauge

Loco 3, a modified Ruston 20DL, is now in service. It was built during WWII and used in British ammunition depots and eventually found its way out to Auckland in rebuilt form at the Footrot Flats theme park. It arrived at Riverside Railway 19/1/2012 after a successful Trademe bid. It has been modified to run on the railway and on 7 January 2013 it ran its first passenger train as a trial run. This brings the railway's loco fleet to four. *FRONZ Journal* January 2013 issue number 118



Superb! A sneak preview of freshly painted Hudswell Clarke 0-4-OST 1056 of 1914 ex Lautoka Mill, Fiji, at Statfold Barn on 28 February. This locomotive is expected to be in action at the Statfold Open Days in 2013. Photo: Henry Noon



Above: One of Ida Bay Railway's Malcolm Moore 4wDM locomotives brings the 11.30am train from Ida Bay station to Deep Hole and return across the level crossing at Cockle Creek Road, near Ida Bay on Tuesday, 26 February 2013. The flashing lights and colour light approach signals were funded by the Commonwealth Government's Nation Building program. Photo: John Hoyle

Below: At The Museum of Historic Engines, Goulburn NSW, in April 1973, Krauss 0-4-0T 5945 of 1907, ex-Fairymead Sugar Mill 7, ex-Burrinjuck Railway ARCHIE, rolls into the museum yard with a well-patronised passenger train, following a return trip out to the Crookwell Road. Photo: Bruce Belbin

