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LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways

Light Railway Research Society of Australia Inc.

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Imperial to metric conversions:

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

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No 271 February 2020

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Editorial

Welcome to 2020 and a happy new year to all of our readers.

The LRRSA Council is constantly looking to the future and how we can best meet the needs and interests of our readers. One of the major issues being considered is the long term future of this magazine. Over the last few years we have seen a slow but constant decline of the number of members of the Society. This may be due to the age demographic or of a general decline of interest in the niche interest area of light railways.

At the same time, we are not experiencing any decline in the number of magazines sold through newsagents across the country and depending on a number of factors such as the topics covered in a particular edition, the sales can increase markedly.

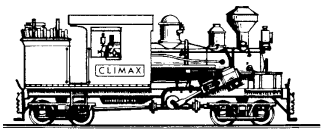
The real area where interest has grown very rapidly and constantly is the Facebook page *Light Railways of Australia*. In the two years since it was established, it has constantly grown to over 1400 members and the variety and quality of material presented is huge. The Council constantly look at ways of being able to utilise this platform and you will see more of that in the future with such things as special offers, registrations of interest for new books and appeals for information to assist researchers.

What does all this mean ? It may well be nothing more than the way people receive their information is changing and some people are simply getting more and more information via social media rather than via hard copy magazines.

The long term future of the magazine is assured for the moment – we all enjoy publishing it each edition – but there may come a day when we only publish the magazine on Facebook?

Richard Warwick

Front Cover: *DH59 B-B diesel-hydraulic locomotive on the Undergear Inspection Train at Menzies Creek, Victoria, 25 October 2001. The undergear inspection train is a regular working of empty cars from Belgrave to Menzies Creek. At Menzies Creek there is an elevated section of track which enables easy inspection of rolling stock undergear. DH59 is an ex Queensland Railways 3 ft 6 in gauge locomotive regauged to 2 ft 6 inch in 1996 by the Puffing Billy Railway. From 1996 to about 2005 it retained its Queensland Railways livery, as shown in this picture. It was then repainted in Victorian Railways blue and yellow livery. Photo: John Dennis*



Light Railway Research Society of Australia Inc. A14384U
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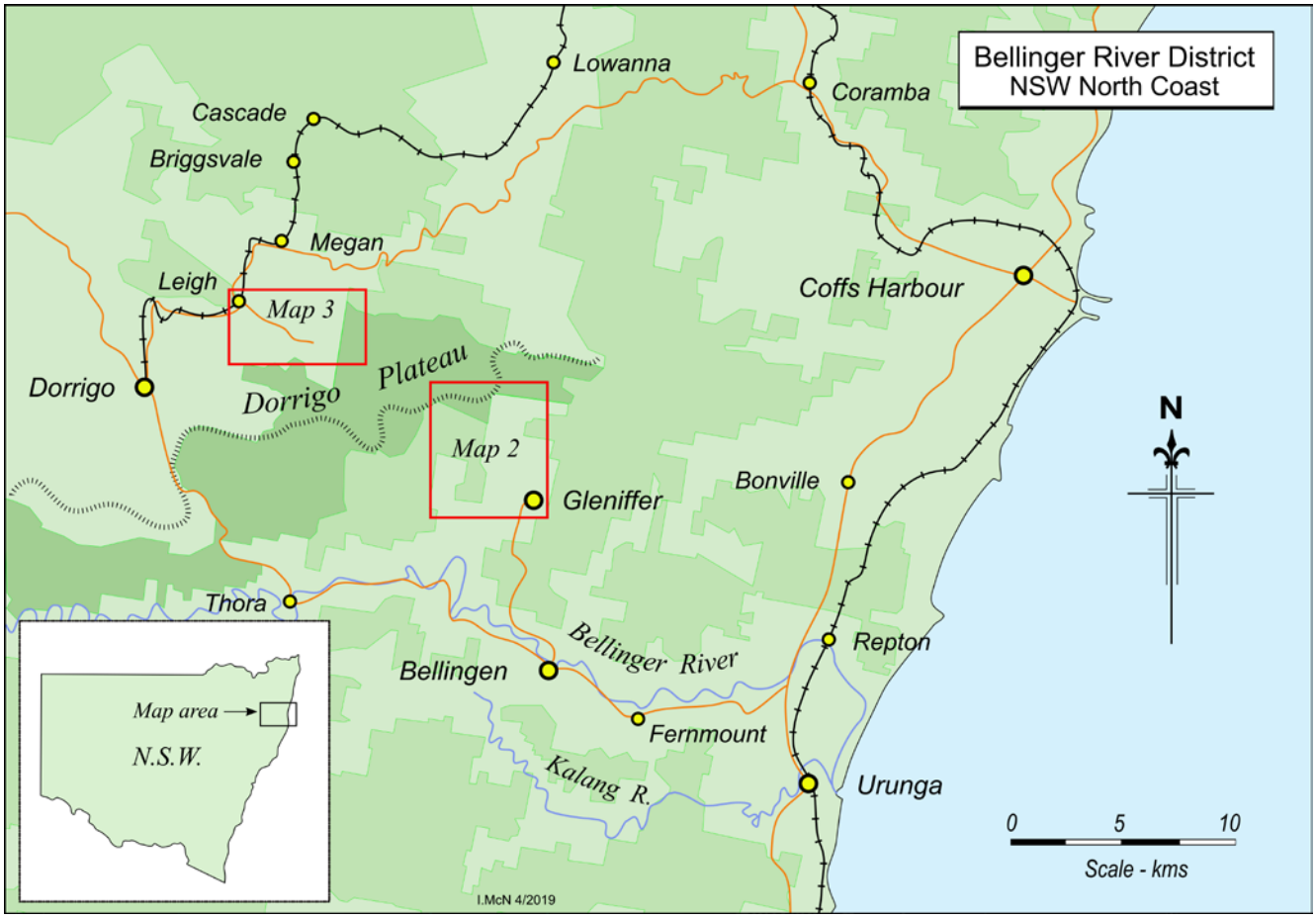
The Light Railway Research Society of Australia Inc. was formed in 1961 and caters for those interested in all facets of industrial, private, tourist and narrow gauge railways in this country and its offshore territories, past and present.

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

Light Railways is the official publication of the Society. 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.



Map 1: The Bellinger River district and the Dorrigo Plateau. Before the railway came to Dorrigo in 1924, timber was road-hauled down the mountain to Bellingen, taken by steam punt down the Bellinger River, then transhipped to coastal steamers at Urunga.

The Bellingen Timber Company and the Gleniffer Incline Tramway

by Ian McNeil

An earlier account of the Bellingen Timber Company by the author appeared in *Light Railways* No 100 in April 1988.[1] With the passage of time, and especially with the advent of *Trove*, considerably more information has come to light, which has afforded an opportunity to update and expand on the history of this enterprising company and its spectacular Glennifer Incline Tramway.

Introduction

To the north of the Bellinger River lies the Dorrigo Plateau which reaches up to 1000 metres above sea level along its steep southern escarpment. Much of it was once covered in thick rainforest containing extensive stands of hoop pine (Auracaria cunninghamii), rosewood and beech. Large scale exploitation began in 1900 when the first road, the Dorrigo Cutting – today's Waterfall Way – was cut up the side of the mountain from Bellingen. Soon five big sawmills had been set up around Dorrigo and began sending some 400,000 feet of sawn pine and rosewood monthly down to the river wharves at East Bellingen. Thirty teams of horses and bullocks worked the run; heavily loaded waggons hauled by 12 to 16 horses were a common sight on the narrow winding road. Shallow-draft steam punts took the timber downriver to coastal steamers waiting in deeper water at the river mouth to take it on to Sydney.

By 1908 much of the marketable pine around Dorrigo had been cut out. The remaining hoop pine stands further east and along the southern escarpment were relatively inaccessible due to rugged terrain. Attempts to scale the escarpment from Gleniffer were unsuccessful; the spur ridges plunging down the mountain side were too steep even for resourceful bullock teamsters to negotiate. Large-scale exploitation of these forests did not begin until the Dorrigo branch railway opened in 1924.

The Bellingen Timber Company solved this problem more than a decade before the railway came, by constructing a spectacular inclined tramway – the "Syndicate Line" – down the mountainside to get its pine logs to Bellingen for shipment to Sydney.

William Hammond and Arthur Wheatley

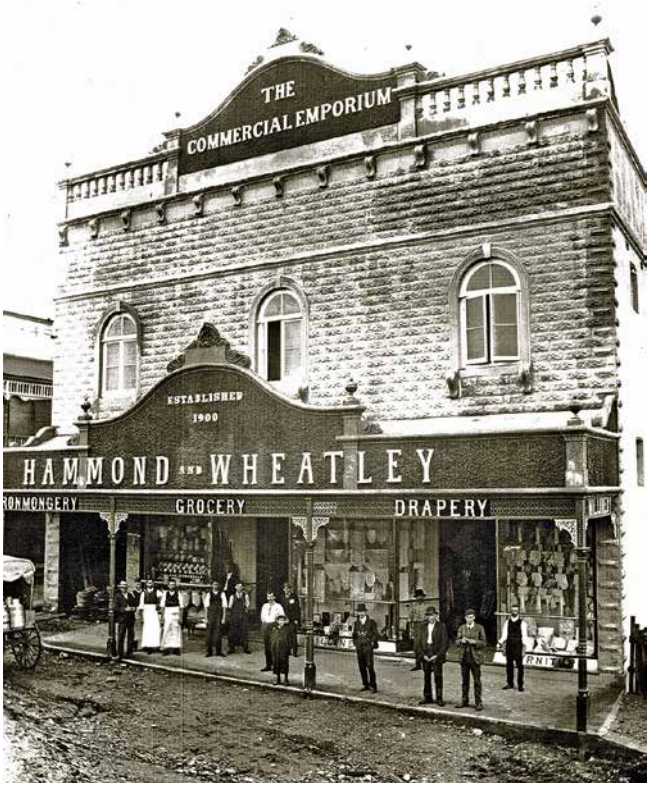
In 1908 two local Bellingen businessmen, William Hammond and Arthur Wheatley, set up the Bellingen Timber Syndicate to exploit the hoop pine forests above Gleniffer.

William Joseph Hammond hailed from Melbourne and came to Bellingen in 1897 on tour with the St. Austell Photographic Company. He set up his own photographic studio at Fernmount in the former Commercial Bank premises and canvassed the surrounding districts for work. The short-lived Bucca Creek goldfields were then at their peak, and William relocated to the 'Alma' studio built for him by Bucca Creek hotelier Joseph Smith. A set of exquisite glass plate negatives illustrating life on the goldfields survives as a legacy of William's short time there.

Arthur Edward Wheatley began his career at the AJS Bank in Bellingen, then after the bank crash in April 1893, was employed by the Commercial Bank of Sydney at Coramba. In early 1897 he declined a move to the bank's Armidale branch and took up employment as accountant with James Marles, an enterprising businessman with general stores at Woolgoolga and on the Coramba and Bucca Creek goldfields

William and Arthur became acquainted on the goldfields and forged an enduring and successful partnership. William's business acumen and entrepreneurial nature complemented Arthur's financial management skills. By 1899 the gold had gone and in 1900 they returned to Bellingen where, as Hammond & Wheatley, they established their Reform Store in a rented timber-framed cottage. Business was good and they prospered. Ten years later they employed master-builder George Moore to build their magnificent Commercial Emporium over the old cottage. Faced with a lack of suitable stone, Moore used concrete blocks to construct the large two-storey building, employing an American concrete-brick making machine, Bellinger river gravel and Portland cement.[2]

Arthur Wheatley died at a relatively young age in December 1916. William Hammond carried on as sole proprietor and in 1929 converted the business into a registered company, Hammond and Wheatley Limited, with a capital of £30,000.[3] The well-maintained Hammond and Wheatley Emporium is still in use today, trading in fashion and homewares. Several large photographs of the Emporium in its hey-day are displayed inside and the second storey still features the beautiful cedar balustrade circling around the atrium.



William Hammond and Alfred Wheatley were prime movers behind the set-up of the Bellingen Timber Syndicate to exploit the virgin pine forests on the Dorrigo Plateau. Their magnificent Commercial Emporium in Bellingen was one of the grandest department stores on the NSW North Coast when it opened in 1910. Photo: Bellinger Valley Historical Society

The Bellingen Timber Syndicate

Hammond and Wheatley brought some of the leading Bellingen businessmen into the Syndicate. They included two brothers; Augustus Mead Raymond, a local farmer and grazier, and Edward James Robert Walter Raymond, who owned a carriage and wagon making business; Albert Capp, mine host of the Federal Hotel, and Harry Caldwell who owned the town's butchery.

The Syndicate applied to the Forestry Branch of the Lands Department for a 4000 acre timber concession within Forest Reserve 3409 northwest of Gleniffer. The area included the south-eastern slopes of the Dorrigo Plateau where three steep spur ridges came down from the tableland with deep valleys between them. The slopes carried chiefly hardwoods on the ridges and softwoods in the valleys. The main prize though was over 1000 acres of valuable hoop-pine forest on top of the Plateau. In its application, the Syndicate maintained that the timber could not be logged profitably by bullock teams and would require significant capital investment to make it payable.

Under the regulations then in force, the Forestry Branch had no power to grant monopolies to timber companies in order to protect their investments in sawmills and timber tramways from unscrupulous outsiders. But it was able to extend some protection by exempting specific areas from cutting by ordinary timber license holders, and then granting special timber licenses only to a specific company and its employees. This practice had been first applied two years earlier at Coffs Harbour, where the Langley Brothers were granted a special license over 1000 acres of forest into which they were planning to construct a tramway.

In the case of the Bellingen Timber Syndicate's application for 4000 acres, the Forest Branch exempted the area from the operation of ordinary timber licenses, gazetted as Exemption 08/27, in November 1908. The Syndicate was granted a special license to take timber off it, providing it deposited a bond, commenced work within 12 months, cut a minimum of 240,000 feet of timber a year, and paid the applicable royalties.[4] A few months later a surveying team laboriously blazed the perimeter of the concession across steep and rugged terrain.

The most valuable timber in the exempted area was the hoop-pine forest on top of the tableland. To tap this timber, William Hammond applied for a Special Lease to construct a two-mile long timber shoot down one of the spur ridges, now known as the Syndicate Ridge, to the head of an old cedar track that had been blazed up the lower, easier, part of the ridge. He was granted a 10-year lease in May 1909 for £3 a year, on condition that the timber shoot would be constructed within two years.[5] The proposed timber shoot also had to be surveyed and a plan lodged with the Lands Department; this was duly done by a local Bellingen surveyor in April 1910.[6]

The granting of a special timber license to the Syndicate aroused the displeasure of one Theodore McLennan, a local timber getter. He objected strongly to being excluded from what he regarded as his right as a licensed timber getter to cut timber anywhere on Crown Land. In a series of letters to the Forestry Branch, which eventually came to the attention of the Minister for Lands, he complained that the Syndicate was not working its concession area, and claimed that the area could be worked profitably by bullock teams.[7] He demonstrated this by cutting a bullock track up one of the spurs to carry out some unauthorized logging. Although the pine logs he cut were subsequently confiscated by a Forestry Inspector, he had made his point and the matter was referred to the local Land Board for investigation.

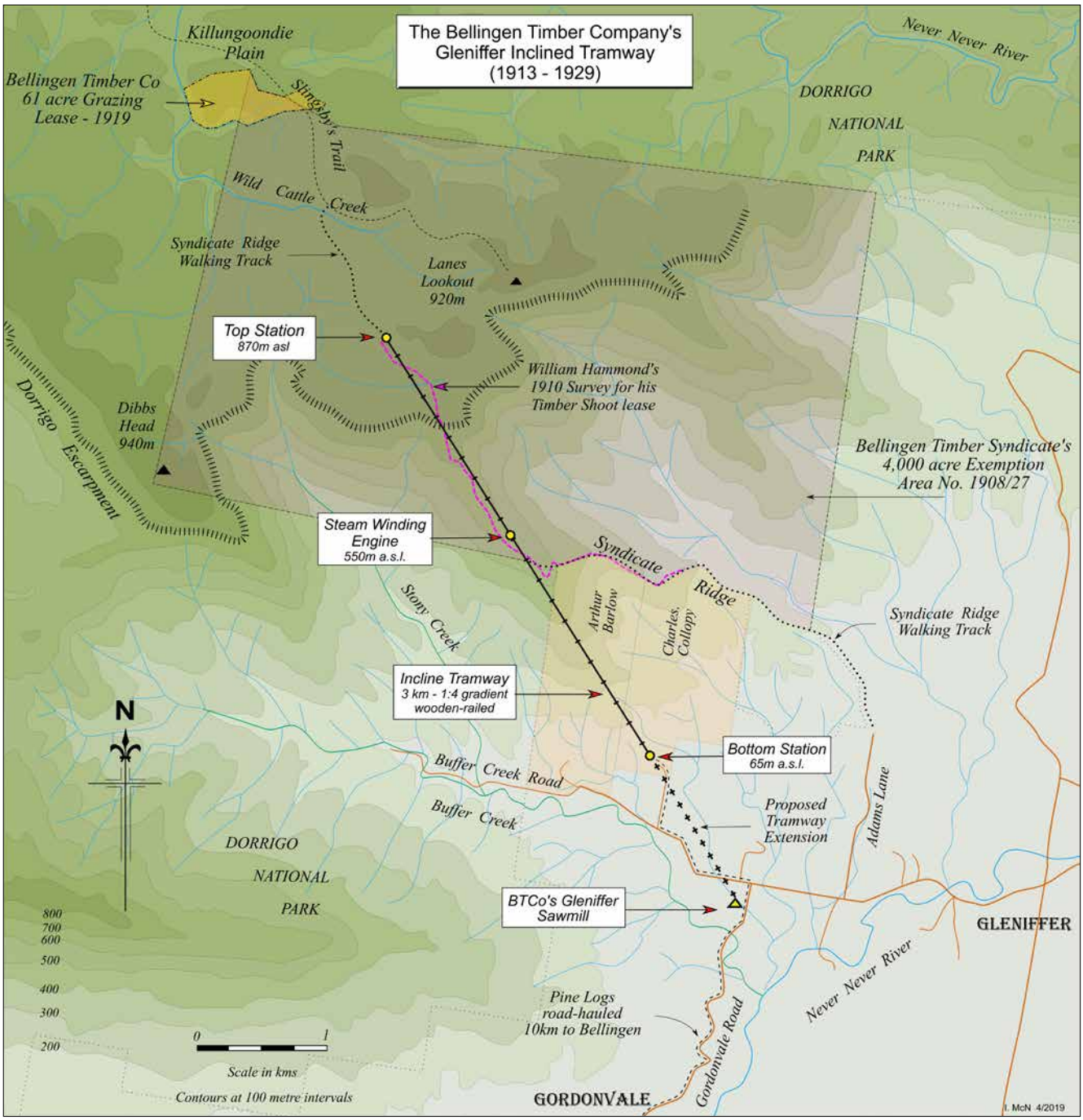
By then the 1909 Forestry Act had come into force. It allowed Exclusive Rights to be granted over forest areas which could not be profitably worked by ordinary means and

which required significant capital investment to do so. The Bellingen Timber Syndicate applied to have its concession area converted into an Exclusive Right under Section 15 of the Act. As per the regulations, the Bellingen Land Board held a public inquiry into this and several other applications for Exclusive Rights in its district in November 1910. Unfortunately for the Syndicate, its application was refused with the Board concluding that:

> The extraction of timber from any part of this area is difficult by any means, but the applicant Syndicate has failed to show that the inclusion of the more profitable parts of the area is necessary to render their expenditure in working the area as a whole profitable.[8]

However, the Syndicate still retained its 4000 acre concession area and William Hammond's ten-year Special Lease for a timber shoot down the Syndicate Ridge. The Land Board acknowledged that although bullock teams could spare-chain logs down the ridge, albeit with great difficulty and not altogether safely, the narrowest part of the ridge was not passable outside the one chain width of the Syndicate's lease. Thus the Syndicate held a virtual monopoly over the valuable hoop pine stands on the edge of the tableland by virtue of its special timber license and its control over the most practical outlet route.

To exploit its timber the Syndicate entered into a partnership with Langdon & Langdon, a large firm of timber merchants and furniture manufacturers based in Annandale, Sydney, and formed the Bellingen Timber Company (BTCo). The company was registered in Sydney in April 1911 with a capital of £7,000 in £1 shares with the object of carrying on the business of timber merchants at Bellingen. Two brothers, William Lawrence Langdon and Frederick Lawrence Langdon, and their brother-in-law William Oates joined William Hammond and Alfred Wheatley as directors of the BTCo. William Hammond was elected as the company's secretary and the registered office was set up in Bellingen.[9]



Map 2: The Bellingen Timber Company's 2-mile long inclined tramway brought hoop pine logs down from its concession area at the top of the Dorrigo Plateau. The tramway had a steam winding engine at the mid-way point and was considered a major engineering feat in its day.

Construction of the Gleniffer Inclined Tramway

The newly-formed BTCo had sufficient capital to construct an incline tramway, instead of a timber shoot, to bring pine logs down from the Dorrigo Plateau. This was done because the company's main customer and shareholder, Langdon and Langdon, needed good quality pine logs for furniture and cabinetry. Timber shoots could damage logs that were launched down steep slopes. Another factor was the sharp spine of Syndicate Ridge, so narrow in parts that there was a good chance of logs veering off course and disappearing into deep valleys on either side.

The company's arrow-straight inclined tramway was two miles long. It started from the top of the Dorrigo Escarpment, 2850 feet above sea level, about half-way between Dibbs Head and Lane's Lookout. It ran down the spine of Syndicate Ridge on grades as steep as one in three. Halfway down the main ridge it veered off in an easterly direction. The tramway however continued in a straight line down a secondary spur on even steeper grades to the valley floor 2500ft below.

The top half of the tramway, on Syndicate Ridge itself, passed through Forest Reserve 34091, which was Crown Land. Under ordinary circumstances the company would have been required to apply for a Special Lease from the Lands Department to construct and operate a tramway on Crown Land. But as the tramway followed the route of the Syndicate's proposed timber shoot, for which a lease had already been granted, no additional permission was needed.

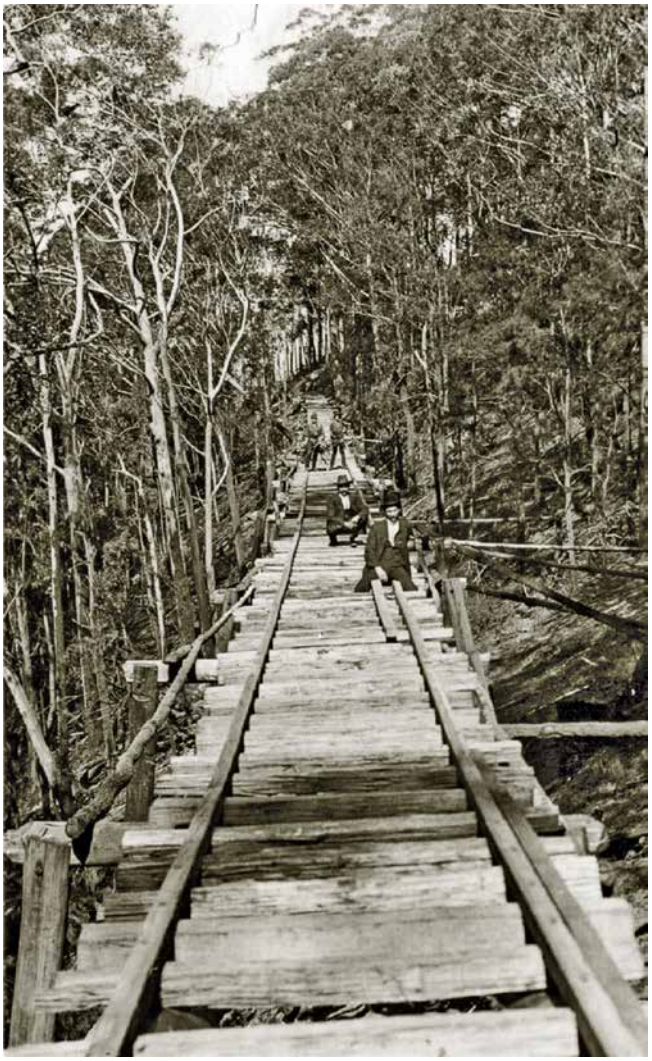
George Smith, who had built the inclined tramway at the Bakers Creek gold mine at Hillgrove near Armidale, was engaged to construct the line and he began work in February 1911. The route of the incline was selected so as to keep engineering works to a minimum. Generally, earthworks were restricted to shallow side cuttings, but a number of trestle bridges and a large amount of timber support work were required to minimise changes in grade. Several hundred rough posts, seven feet long, were sunk into the ground to anchor the line to the mountainside. The line was four feet gauge, constructed with wooden rails measuring 4 in x 3 in cut from local brush box and spiked to locally cut sleepers.[10]

A steam winch and a 48 hp boiler weighing 6 tons were installed halfway up the incline tramway.

They were mounted on wooden sleds. Local teamsters, James and Charlie Lavender, yoked two bullock teams together, 40 beasts in all, to drag the sleds over the old cedar track up Syndicate Ridge. On the steepest sections a wire rope attached to one sled at a time would be taken up hill for a hundred yards or so and passed round a pulley wheel attached to a stout tree. The free end of the wire was coupled to the yoked bullock teams waiting below. With whips cracking and curses ringing out, the bullockys urged their teams downhill to lift the load a few feet at a time. The job took longer because the bullocks had to be taken down to the river flats every second day to pasture, as there was little feed on the slopes. It took over four weeks to get the boiler and engine to the winch site. The construction of the two-mile long tramway incline was a demanding task which took two years to complete. It cost £10,000 to construct and the first load of logs was brought down from the top in January 1913.[11]

Operations on the Gleniffer Inclined Tramway[12]

The undulating profile of the top section, the steam winch's position at the half-way point, and the incline's three kilometre length dictated that the tramway could not be worked as a single balanced incline. Instead it was worked in two sections, with a dedicated log trolley operating on each section. The two



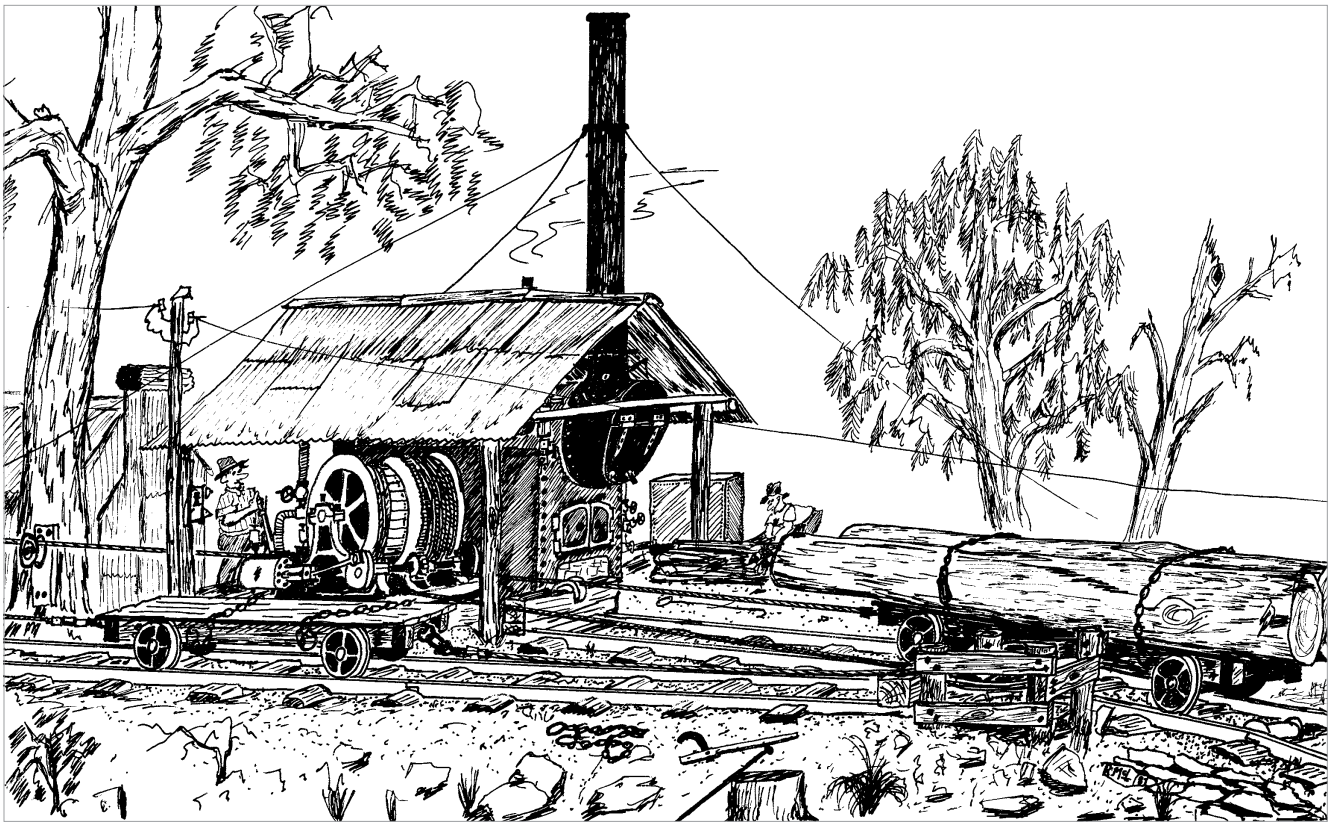
Frank Box and Jack Boulton pose on newly-built timber trestle work on the Gleniffer Incline Tramway during its construction circa 1912.
Photo: Bellinger Valley Historical Society

four-wheel log trolleys were strongly-built affairs, 14 ft long by 5 ft wide, made from heavy 9 in by 6 in hardwood timbers and running on 18 in diameter cast iron wheels.

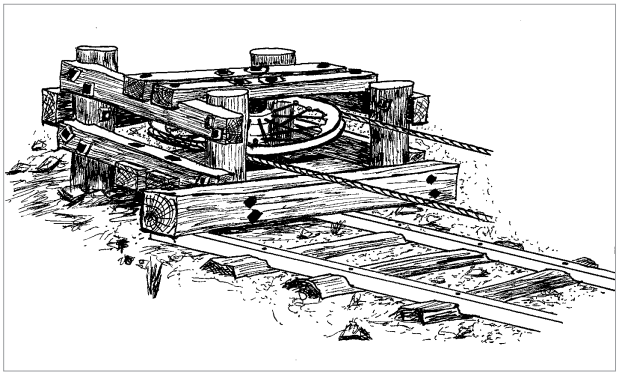
The upper section, between the Top Station and the steam winch, was operated by a two-mile long, one-inch diameter wire rope in the form an endless loop. The wire went up beside the tramway from one of the steam winch's winding drums, looped round a seven-foot diameter bull-wheel horizontally-mounted at the Top Station, and came back down the centre of the tramway to the same drum. It was strung alongside the tramway on cast-iron pulley wheels attached to convenient tree trucks and purpose-driven posts, and guided back down the centre of the tramway on cast-iron cable rollers.

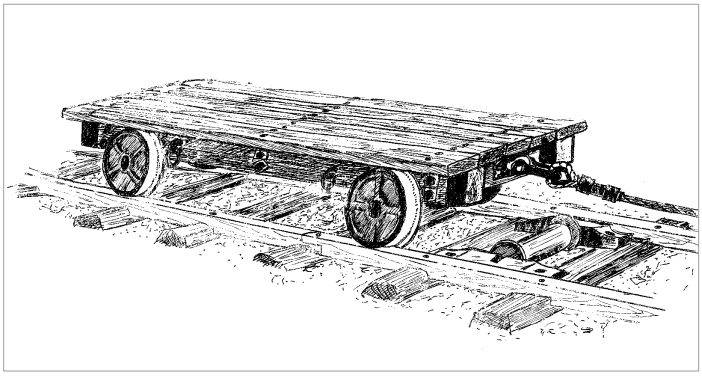
The lower section, between the steam winch and the Bottom Station, was operated more conventionally by one mile of wire rope wound around the steam winch's second drum. It was guided down the centre of the tramway on cast-iron cable rollers.

Bullock teams hauled pine logs to a loading bank at the Top Station. One or two logs totaling about 1000 superfeet of timber were loaded onto the top trolley and securely chained down. A telephone line connected the steam winch driver to both the Top and Bottom Station conductors to allow operations to be coordinated. When the winch was started it simultaneously began lowering the loaded top trolley down the top section of the incline, and hauling the empty bottom



Above: *Artist's conception of the steam winch located half-way up the mountain on the Gleniffer Inclined Tramway. There was a passing loop near the winch where logs were transferred from the top trolley to the bottom trolley.* ***Below left:*** *A seven-foot diameter bull-wheel - an ex-colliery poppet-head winding wheel - was securely mounted at the top of the incline tramway, anchored in place by 16-inch diameter posts sunk deep into the ground. A one-inch diameter wire rope from the steam winch passed round it to connect to the top timber trolley* ***Below right:*** *One of the two heavy log trolleys on the incline tramway. Each measured 14ft long by 9ft wide and was made from substantial 9in by 6in hardwood timbers. They ran on 18in diameter cast-iron wheels with a track gauge of four feet.* *Artist: Bob McLeod*





trolley up the lower section of the incline. Along the top section the winch also needed to pull the top trolley up a short reverse gradient from Stony Creek before continuing down the main descent.

The two log trolleys met at the steam winch where a loop siding had been constructed on a relatively flat piece of ground. Here the logs were transferred from the top section trolley to the bottom section trolley. The winch driver then reversed the winch operation to haul the empty top trolley back up to the top and lower the loaded bottom trolley down to the Bottom Station. At the bottom station the logs were unloaded to be taken by road to the Bellinger River for shipment to Sydney.

The steam winch itself was located some 2000 ft above the valley floor, and it was deemed impractical for winch drivers to climb up before dawn every morning to raise steam. A two-room hut was built at the winch site for them to live in during the week. This was too much for the first driver, a Mr G Madrick from Coffs Harbour. He quit after two weeks, saying that one needed to be related to the native bear tribe to climb that precipitous mountain every week.[13]

The regular winch driver was Roy Humphries. He climbed up the line every Sunday afternoon to the steam winch to have the fire lit and steam raised ready for operation first thing on Monday morning. The first trip of the day was run to bring up Jack Smith, his fireman; Charlie Timms, the Top Station Conductor; Roy Willis, the Bottom Station conductor, and any timber workers needing to go up to the top.[14]

Operations on the incline tramway could be challenging. The Dorrigo Plateau has a very high annual rainfall. Tree felling and log hauling operations were often hampered during wet weather. During the frequent thunderstorms that develop along the escarpment, lightning would sometimes seek out the wire rope, sending out long blue sparks to any metal work in the vicinity. The water supply for the boiler was piped from a water seep under a nearby rock ledge, and when this failed in dry weather, operations had to be suspended.

According to local oral history, riding the trucks was not for the faint hearted, as in the last years of operations some of the trestle bridges and timber supports would sway vigorously as the laden trolley passed over. There were also derailments and wire breakages to contend with. Wire repairs were effected by Michael Leconnen, a Russian-Finn stowaway who was known for his prodigious feats of strength loading produce and goods on and off the Doepel river barges at Bellingen.

In April 1918 there was a major landslide on the lower section of the incline when a big section of hillside fell away. The incline foreman, George Dillon, rounded up all the extra labour he could find, and in two weeks his crew had constructed a 100 ft long trestle bridge to span the gap.[15]

The incline was popular with tourists in the early years as illustrated by this contemporary account:

> The Bellingen Timber Company Limited was formed about four years ago to exploit the pine on the Bellingen side of the Dorrigo Range, and this involved the carrying out of a big engineering scheme for lowering the timber down the mountain sides. A tramline was constructed up one of the main spurs, a distance of about two miles from the foot of the mountain to the summit, which is at a height of 2500ft. This particular tramline is the objective of a large number of people on pleasure bent, many of whom have ridden to the top of the mountain on the trucks in a few minutes, obtaining therefrom magnificent views of the Bellingen Valley and the Pacific Ocean in the distance.[16]

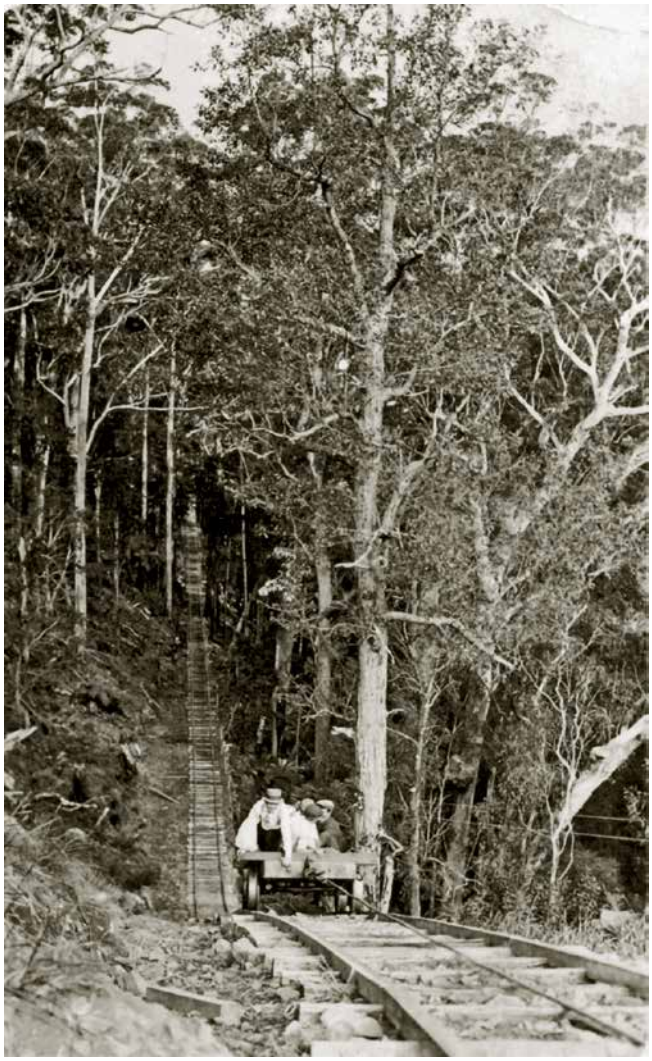
One visitor in January 1913 was not so fortunate, being thrown off the truck and fracturing his skull:

> Mr. Asher, a visitor from Sydney, was the victim of a somewhat serious accident on Friday night last. In company with Mr. Harold Raymond, the pair went on a tour of inspection in the Syndicate tram, and when reaching Gleniffer the truck jumped off the line. Mr. Asher was thrown off the tram, and sustained a fracture of the skull, rendering him unconscious, and, in addition, the muscles of his back were much injured. He is now an inmate of the local hospital, and from inquiries made we learn that the patient is progressing as favorably as can be expected. Mr. Raymond fortunately escaped without injury.[17]

George McFadyen, whose father's farm was in the vicinity, said he and other school boys on occasions rode the empty truck up to the midpoint when the line was working on a Saturday. The Reverend Rudolf Dillon, son of the foreman George Dillon, also made a trip up the mountain when he was young. He recalled:

> As a boy, without the knowledge of my parents, I walked from Gordonville to the foothills, told one of the workmen that I had an urgent message for my father, was allowed to go on board and be pulled up by the engine on the side of the mountain to be greeted by my unsuspecting and amazed father, who was working the machinery.[18]

Another would-be passenger was not so lucky. In February 1922, Dr. Eric Barbour was in Bellingen one weekend to perform an operation. Returning to Dorrigo to attend a sick patient, he found the Bellinger River bridge at Thora was under water. He arranged a lift to the incline tramway, intending to ride a log trolley to the top. Unfortunately, it being the weekend, the tramway was not operating. Undeterred, he climbed up the incline, stepping from sleeper to slippery sleeper along trestles 80 to 100 feet above the ground, "with pulverization waiting grimly beneath". He arrived at the top somewhat weary, had a reviving cup of tea at a timber-cutter's camp, and then resumed his weary trudge towards Dorrigo. Flooded tracks forced a detour and darkness fell while he was still deep in the forest. He spent an unpleasant night standing under a tree in the pouring rain, trying to avoid the attentions of innumerable bush leeches. When dawn finally came he was able to make his way to a settler's house where a concerned search party caught up with him. In all the doctor had walked about 17 miles, and despite his athletic training, "was considerably exhausted".[19]



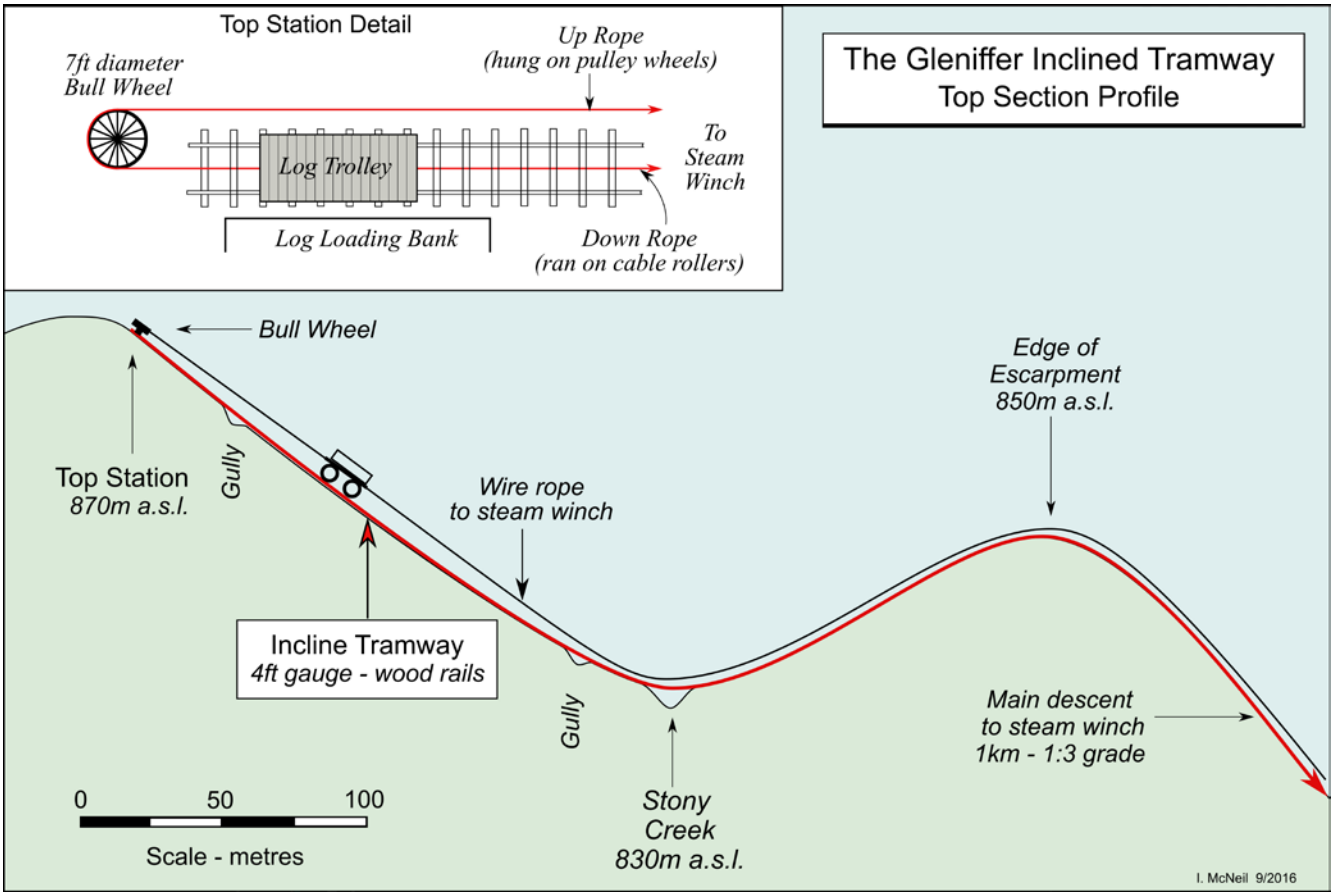
A tourist party on the single-wire operated lower section of the incline tramway just below the steam winch. The apparent rise behind the trolley is in reality a continuation of the downhill run on a lesser gradient. The tramway telephone line can be seen to the right of the log trolley.
Photo: Bellinger Valley Historical Society

Timber Transport

All of the company's pine logs initially went to Langdon & Langdon's big timber yards in Annandale, Sydney where they were mainly used in the manufacture of furniture and cabinetry. Getting the logs to Sydney was an involved process requiring multiple handling stages and several different modes of transport.

Hoop pine was felled on the Plateau and cut up into logs, which were hauled to the loading platform at the top of the tramway by hired bullock teams. The company had problems getting teamsters to stay on the job; the rough country around the head of Wild Cattle Creek was covered in dense virgin rainforest and there was no natural feed for the bullocks. At the start of operations in 1913, the BTCo advertised as follows:[20]

> Bullock Teams Wanted. Teamsters with anything from 12 bullocks and up, are required for drawing pine logs in the scrub for distances of from 1 mile to 3 miles. Big prices are being paid to teamsters enabling them to earn big cheques. Apply at once to W.J. Hammond.



The undulating profile of the top section of the Incline Tramway required a 2-rope operation by the steam winch to move the log trolley between the Top Station and the start of the main descent.

Four teams were soon at on the job but it was noted at the time that; "as it is some distance beyond the settled country, the bullocks have to be fed on chaff – which costs one pound a day for each team." In an effort to solve the feed problem, the BTCo leased 61 acres on the naturally-grassed Killungoondie Plain from the Lands Department in 1919 and fenced off an area in which to pasture bullocks.[21]

Logs were handled three times on the incline tramway; unloaded from bullock wagons onto the top log trolley, transferred from top log trolley to bottom log trolley at the half-way point, then loaded onto bullock wagons again at the bottom.

It was six miles along the Gordonville Road from the base of the incline to the Bellinger River at East Bellingen where the BTCo had constructed a wharf on 20 acres of river-front land leased from Mr. W E Bennett. Bullock teams hauled the company's logs at first until a seven horsepower steam traction engine was acquired. This was Fowler No. 13007, imported to Australia in 1912 by the Austral Engineering Supply Coy Ltd. It had a 6¾ in diameter high pressure cylinder, an 11½ in low pressure cylinder, and a 54 in x 6 in flywheel.[22] Wal Wilkinson and Tom Powditch were two of the regular drivers employed; they had to take the longer Gleniffer Road to Bellingen on account of the engine's weight.

The Bellingen Timber Company first employed bullock teams to haul its pine logs to the Bellinger River for shipment to Sydney. Later it acquired a 7hp Fowler steam traction engine for the six-mile road haul. Photo: Bellinger Valley Historical Society

At East Bellingen pine logs were loaded onto shallow-draught steam punts to be taken 13 miles downriver to the Bellinger River mouth at Urunga. Here they were transferred to coastal steamers for the trip to Langdon & Langdon's timber wharves at Blackwattle Bay in Sydney Harbour. During the early 1920s Langdon & Langdon had its own steamer, the *Astral*, on the Bellinger River run.

The shipping leg was another problem area for the company. The shallow Bellinger River bar often caused long shipping delays, with vessels sometimes bar-bound for days or even weeks at a time. They were forced to wait until either the hard-pressed Public Works Department could send one of its ocean-going bar dredges to afford temporary relief, or a strong fresh coming down river cleared a channel through the entrance shoals. On other occasions, river levels rose rapidly after heavy rain resulting in major flooding. On at least three occasions the BTCo lost scores of pine logs washed off its Bellingen wharf during floods.

Under New Management in 1916: Claud Stanley Wilson

Claud Stanley Wilson was a prosperous breeder of Jersey cattle and an astute businessman who came from the Sydney suburb of Pymble. He purchased land, on which the village of Lowanna now stands, beside the surveyed route of the Glenreagh to Dorrigo Railway, which was then under construction by Norton Griffiths & Co., the government's railway contractor. In 1916 he established the private town of Gundareen on his property to service the large number of railway navvies as well as a growing number of settlers on the Eastern Dorrigo.[23] Gundareen had a general store, butchery and a bakery, which were soon followed by a barbershop, a tobacconist and a billiards room. In July 1917 a telephone and telegraph office was installed and the Postmaster-General directed that the name of the village be changed from Gundareen to Lowanna. A few years later Wilson subdivided his land, advertising it for sale as the "*Katoomba of the North Coast*" and the "*capital of a coming farming and dairying centre*." He purchased a large number of BTCo shares from Bellingen shareholders in May 1916, sufficient for him to be elected to the Board of Directors and to be appointed as general manager.[24]

The incline tramway appears to have operated intermittently until Wilson's arrival. It was reported in October 1914 that the Tramway Syndicate "*intend reopening the line to supply logs to Bellingen*," but it was out of action a few months later when the self-confessed 'peripatetic traveler' Cecil Poole paid a visit. Poole had hoped to ride an empty truck up the mountain to return to Dorrigo but had to record instead,

> Woe was me. Bally line was broken, and I had to climb 2500 feet in a mile and a quarter. Or no – writing from recollection only, I think I climbed a mile and a quarter in 2500 feet. One of the staff, Mr. R.C. Clarke, made me as comfortable for the night as he could.[25]

Soon after his appointment, Wilson placed advertisements for bullock teams to draw logs to the top of the incline, and for horse and bullock teams to draw from the foot of the incline to Bellingen wharf. In early August 1916 he advertised for an

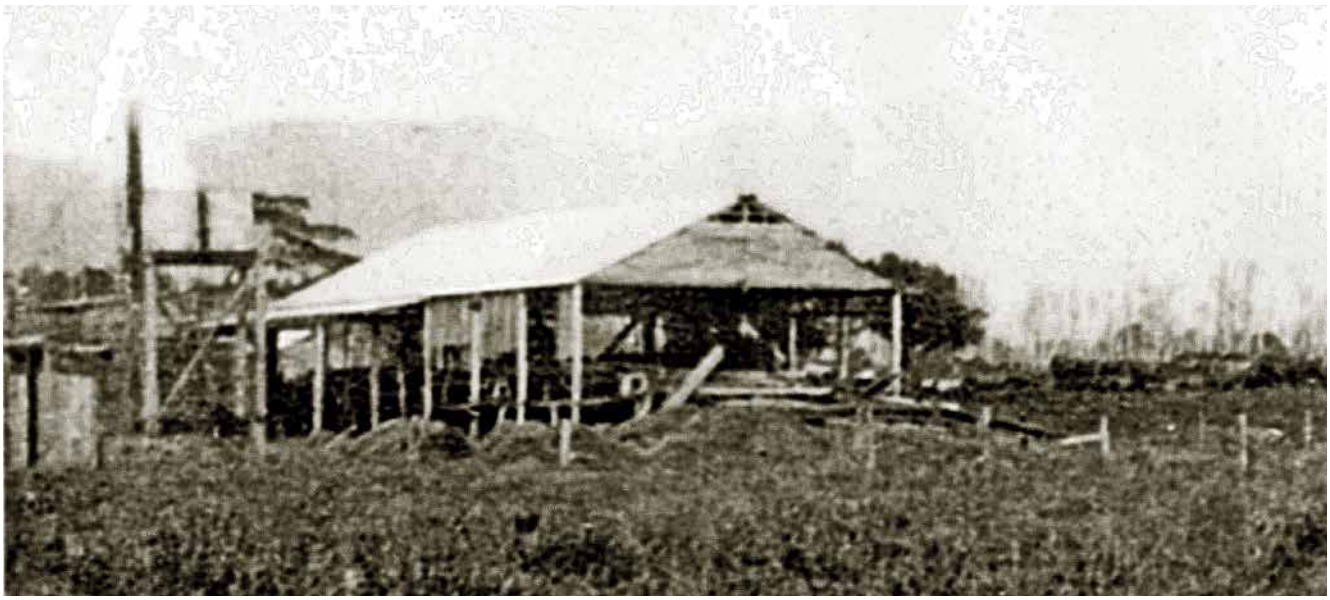
380mm diameter cast iron pulley wheels posed on remnant brush-box rail on the upper section of the Gleniffer Incline Tramway. These pulley wheels were attached to convenient tree trunks and posts beside the tramway to guide the return wire to the steam winch. Photo: Ian McNeil

The cracked remains of the old 7ft diameter bull wheel are still in situ at the upper terminus of the incline tramway. The wheel originally graced the poppet-head of a colliery, and features twin hubs each mounting twelve one-inch diameter spokes. Photo: Ian McNeil

engineer to operate the winding plant, "*single man preferred*," and three weeks later officiated at the re-starting of the incline. The event nearly ended in tragedy for his wife. On the return journey to Gundareen at dusk, Stanley met a bullock team coming down the narrow mountain road from Dorrigo. He stopped his car and the engine stalled. When he got out to crank-start it, the handbrake slipped and the car, with Mrs Wilson in it, ran back down the road and plunged 150 ft down an embankment. She was seriously injured and spent several months recuperating in a private hospital in Sydney.[26]

The Bellingen Timber Company's Gleniffer Saw Mill

The BTCo enjoyed modest prosperity between 1918 and 1922 and made plans to expand its operations. It established a small hardwood saw mill employing some 15 men near Gleniffer, about one kilometre from the bottom of the incline tramway. Plans were made to extend the tramline to the saw mill, and a start was made on cutting a tunnel for it through an intervening hill. Local lore has it that the tunneling came to an abrupt halt when workmen tunneling from both sides failed to meet in the middle because of wrong calculations by the surveyors.



After WW1 the Bellinger Timber Company set up a small hardwood sawmill at Gleniffer at near the bottom of the Incline Tramway. A tunnel was started at one stage to extend the tramway to the saw mill but was never finished. Photo: Bellinger Valley Historical Society

Bill McFadyen confirmed that his father some years later had two cows killed when they fell down a large hole left where part of the tunnel had caved in, and that for safety's sake some of the tunnel at least was filled in.

The company's manager, Claud Stanley Wilson, put in a survey for a 30-chain extension of the top end of the incline tramway in April 1918, which would have extended the line down to the headwaters of Wild Cattle Creek.[27]

The Gleniffer Mill appears to have struggled during the 1920s. It was shut down in July 1922, with the company stating that high wages, government royalties, cartage and freight charges had made working it unprofitable, and that it would remain closed down indefinitely, pending further consideration of royalty and the cheapening of working costs generally.[28] It did not re-start until April 1924 when the company advertised for an experienced foreman to start immediately. The last record found for the mill appears in April 1937 when the BTCo called for tenders to purchase its Gleniffer Sawmill "as it stands" and requesting a 10% deposit to be lodged with each tender.[29]

The Decline of the Bellingen Timber Company

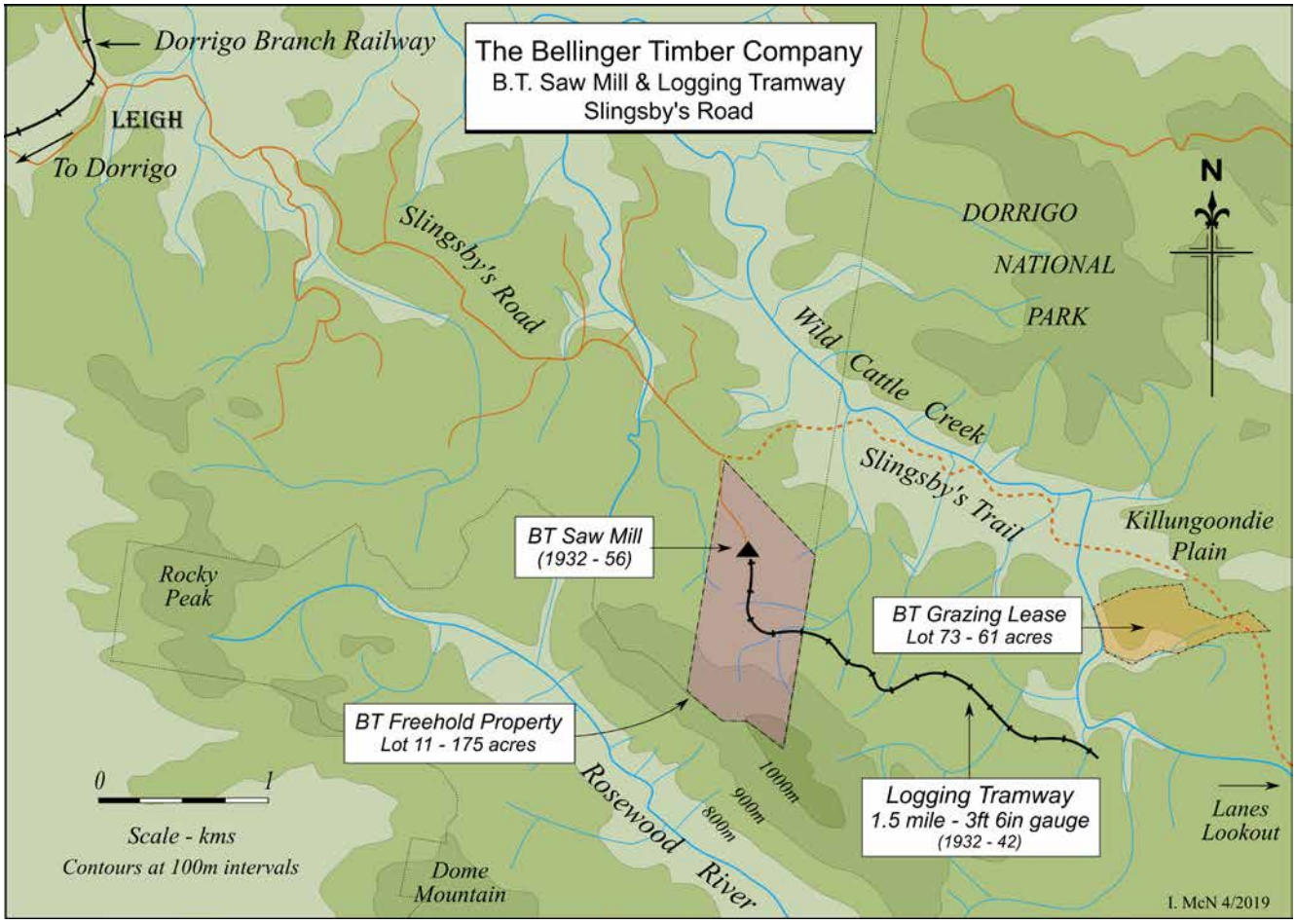
The decline of the Bellingen Timber Company began with the opening of the Dorrigo to Glenreagh branch railway in December 1924. Agitation for a railway to tap the rich timber resources of the Dorrigo Plateau began well before the start of the 20th century. The *Glenreagh to Dorrigo Railway Act* was finally passed in 1910, but construction of the rail link to the timber-rich Dorrigo Plateau did not start until August 1914, on the very eve of the outbreak of World War 1. The construction contract was awarded to Norton Griffiths & Co., the NSW Government's railway contractor. Wartime restrictions meant that the Government was unable to acquire the necessary rails and structural steel needed to keep the work progressing at the contracted rate and it was forced to cancel the contract in August 1917. Construction of the steeply-graded mountain line resumed two years after the war ended. Washaways and landslips contributed more delays and it was not until December 1924 that the 43-mile line was finally opened for traffic.

The opening of the railway had an immediate effect on the Dorrigo Plateau timber industry. Sawmills and timber loading facilities were soon established at many points along the 43-mile long line and enormous quantities of timber began to flow down the mountain to Coffs Harbour Jetty for shipment. The railway offered a far more reliable, though more expensive, way of getting timber onto ocean-going steamships. Coffs Harbour provided an all-weather deep sea port whereas the Bellinger River was only navigable by shallow-draught vessels which could be bar-bound for weeks at time. The days of the Glennifer Incline Tramway were numbered.

The BTCo's main shareholder and customer, Langdon and Langdon, went through some major reversals in the latter half of the 1920s that culminated in its voluntary liquidation in April 1930.[30] Its big Annandale timber yards caught fire in May 1923 and the resulting spectacular blaze, which could be seen for miles around, caused over £100,000 worth of damage.[31] The two principals of the company, William and Frederick Langdon, passed away in 1925 and 1929 respectively. The company's troubles came to a head in 1929 during the bitter timber-workers strike. Volunteers called in to keep the company going were assaulted by strikers and at the height of the troubles another spectacular blaze destroyed the timber yards[32] and brought on the company's liquidation.

The BTCo began to dispose of its assets after the Dorrigo railway opened. The Fowler steam traction engine was put

The first train over the Bielsdown Creek Bridge, 2km east of Dorrigo, on the Dorrigo branch railway, 1st September 1924. The massive piers were necessary to protect the bridge against the creek's periodic violent, debris-laden floods. The coming of the railway opened up the Plateau timber industry but contributed to the closure of the Gleniffer Inclined Tramway. *Photo: Dorrigo Historical Society*



Map 3: After G.L. Briggs and Co purchased the Bellingen Timber Company in 1932, it established a small softwood saw mill and a logging tramway on the Dorrigo Plateau. Sawn timber was hauled by motor lorry six miles to Megan Railway Station and railed to Coffs Harbour.

up for sale in September 1926, the grazing lease on the Killungoondie Plain was forfeited in April 1928, and in March 1929 the company advertised the incline tramway and the hauling plant for sale by auction. Over three miles of one inch hauling rope was included in the offering, as well as the steam winch, boiler, and all the pulleys, spindles and wheels installed on the incline. The tramway sleepers and wooden rails were also included. The auctioneer noted that the machinery was in first class order and would be offered as one lot, or alternatively in separate lots.[33] It appears there was little, if any, interest shown by potential buyers, and the plant remained substantially unsold until the company itself was taken over by G L Briggs and Sons Ltd in August 1932.[34]

The incline tramway was still operable until quite late in the piece, though the phone lines were down after the supports were eaten out by white ants. Mrs. Jean Raymond of Bellingen recalled a trip up the line she made with her husband Harold and their small children Bob and Phyllis. After travelling out to Gleniffer in their T model Ford, they sat back to back on the log trolley. A board had been removed from the floor, into which their feet were placed to get a good grip, as the track was very steep in places — and one looked down on the tree tops at times. On reaching the top, they were met by one of the Briggs in a bush truck (or tractor) and taken to have lunch with the Briggs' at Briggsvale.

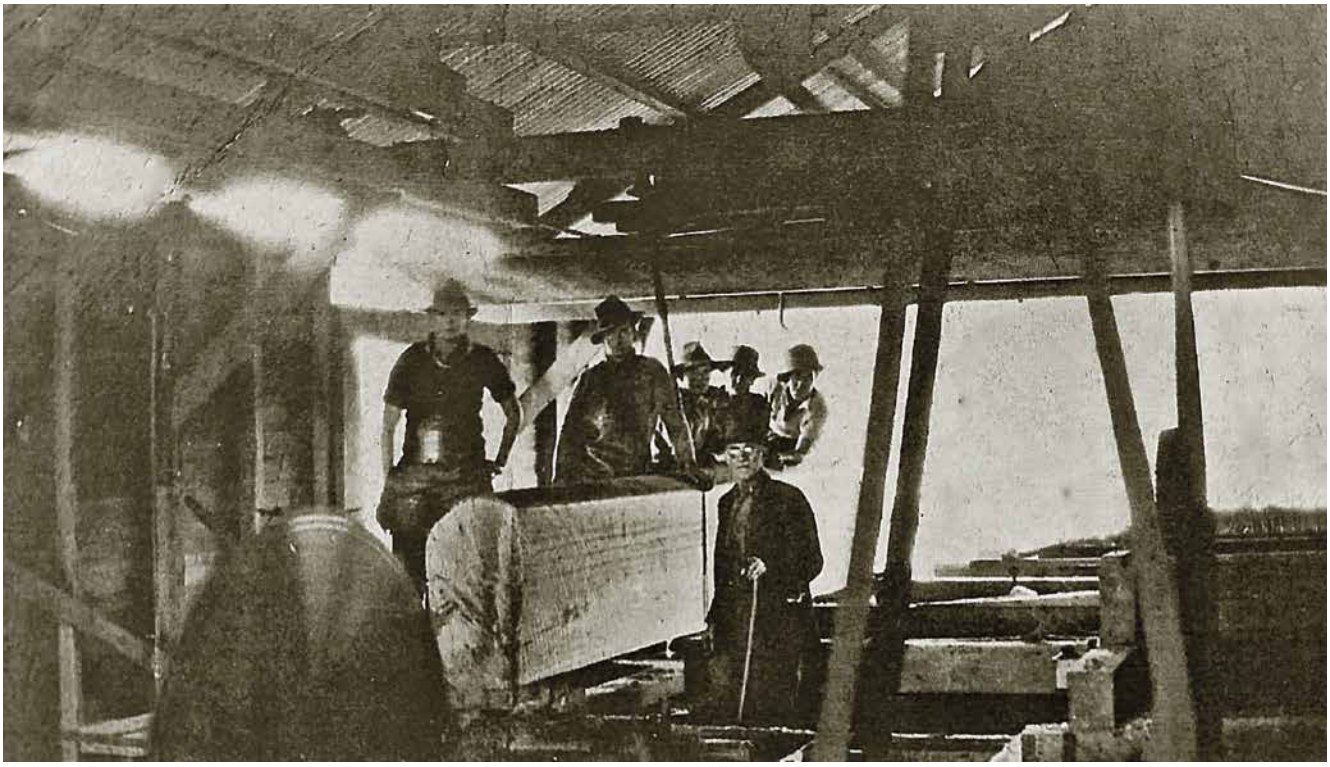
Briggs did purchase the steam boiler that powered the incline's steam winch. Gordon McFadyen recalls walking up the weed-grown line somewhere between 1928 and 1930 to assist Charles Callopy who had been employed by Briggs to paint the boiler to preserve it from rust. He said that shortly after painting the boiler, a strong westerly wind unroofed the engine shed, scattering sheets of iron "from mountain to coast." A Sydney contractor hired a local bullock team of eight to bring the boiler down on a slide, and he was also allowed to have all the scrap metal he could find around the winch site. The steam winch itself was left standing on the mountain until the late 1930s before finally being taken away.[35]

The Bellingen Timber Co.'s 'BT' Saw Mill and Tramway, Slingsby's Road

The Bellingen Timber Company was taken over by G L Briggs and Co. Ltd. in August 1932. George Largie Briggs, the company founder, was one of the pioneer saw millers on the Dorrigo Plateau. He established a pine saw mill at Dorrigo in 1911, and when the Dorrigo Railway opened in 1924 went on to create at Briggsvale one of the largest softwood mills in NSW, cutting up to seven million superfeet of timber annually. He prospered through the years of the Great Depression and acquired the assets and cutting rights of a number of struggling saw mills at knock-down prices.

Briggs acquired the BTCo's cutting rights in the Killungoondie State Forest on the Dorrigo Plateau from the NSW Forestry Commission. To exploit this timber, he purchased a 175 acre property, now the privately-owned Carinya farm, near the headwaters of Wild Cattle Creek on the Dorrigo Plateau. It was situated at the end of Slingsby's Road, some six miles from Megan Railway Station and four miles from the top of the BTCo's incline tramway.[36] He also renewed the BTCo's 61-acre grazing lease on the Killungoondie Plain, which had been allowed to lapse in 1928.

He used some of the BTCo's plant, including the incline tramway's steam boiler, to erect a small steam sawmill, the 'BT' Mill,



George Largie Briggs (right) standing next to the first log to go through his new BT sawmill on Slingsby's Road, September 1932.
Photo: Dorrigo Historical Society

on the north side of his property. It was small affair employing nine men, and had a single Canadian breaking down saw with one breast bench (an ordinary circular saw bench with friction feed rollers) cutting 2 in by 1 in sizes and upwards.[37]

It was a softwood mill cutting pine and brushwood logs – coachwood, sassafras, crab-apple, etc. – drawn from the Killungoondie State Forest around the thickly timbered headwaters of Wild Cattle Creek. Sawn timber was taken by motor lorry to Megan Railway Station, six miles away.

A 3 ft 6 in gauge logging tramway was built in stages to supply the BT mill with logs. It was a combination wood and steel railed tramway with steel rails being used on curves and gradients and brush box rails on easier sections. The Briggsvale Sawmill Plant Register recorded that the first section of 92 chains cost £3 1s 1d per chain plus rails and sleepers, the second section of 25 chains cost £3 7s per chain and there were 50 chains of steel rails in the first mile. The rails came second-hand from the Coffs Harbour Timber Company's defunct Bonville Timber Tramway, Briggs having taken over that company in November 1931.[38]

The 1½ mile long tramway ran in south-easterly direction from the mill, paralleling the range of hills that separate the watershed of Wild Cattle Creek to the north and that of the Rosewood River to the south.

A small four-wheel Fordson rail tractor was used to haul logs to the mill. It had a cast iron frame 9 ft long by 4 ft wide and 22 in diameter wheels. A kerosene engine drove the tractor though a chain-drive off the gear box and a heavy coupling rod between the wheels. Heavy under-frame sandboxes mounted fore and aft completed the picture. It hauled two sets of log bogies and could bring in about 3,000 superfeet of logs at a time.

The tramway had run its course by 1942. Enormous quantities of timber were needed to support the war effort during WW2, which prompted a radical change in Forestry Commission policy. Prior to the war, individuals and companies were granted exclusive access to blocks of timber. All this changed during the war. Blocks were allocated to two or more mills to cut, using Forestry Commission roads to haul timber out. The cost of the roads was added to the royalty payable on millable logs, and this effectively spelt the end of the Slingsby's Road tramway and the other private tramways on the Dorrigo.

The mill replaced its bullock teams with a Caterpillar logging tractor in 1937 and after WW2 it had a petrol-powered logging winch working out in the forest. In December 1948 the tractor fatally injured a timber worker, Cecil Latham, when it ran backwards down a steep slope and pinned him against a tree.[39]

Briggs kept the Bellingen Timber Company as a separate entity within his group of companies. A small settlement of mill workers clustered around the mill, which was connected to the outside world by telephone line. The only access to the mill was via Slingsby's Road, whose deeply-rutted surface and hazardous un-bridged creek crossings were the cause of numerous complaints made to Dorrigo Shire Council. School children, it was said, were sometimes unable to return home and had to spend the night with local residents after heavy rain.

The mill had a close shave in January 1936 when it caught fire early one morning but prompt action by mill workers and local residents restricted the damage to less than £60. It was not so fortunate 20 years later when it was burnt to the ground in 1956. It was never rebuilt and its log quota was transferred to Briggsvale.

The Incline Tramway's Legacy

The upper section of the Gleniffer Inclined Tramway now lies within the Dorrigo National Park and forms part of the Syndicate Ridge walking track, a 1988 Bicentenary Project undertaken by the local historical society. Well preserved sleepers, occasional lengths of wooden rail, old pulley wheels and cable rollers, as well as the Top Station bull wheel can be seen along the way. The remains of one of the log trolleys can be found near the old winch site.

The upper 600 metres is on the top of the Dorrigo Plateau and can be reached by a five kilometre hike along Slingsby's Trail walking track. The Syndicate Ridge walking track down the main incline to the steam winch site and the valley floor is exceptionally steep. Advisory signs warn that it should only be attempted by fit and sure-footed walkers.

Acknowledgements

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Mike Loveday photo competition

At the meeting of the South East Queensland Division of the LRRSA on 20 December 2019 the judging for the award of the annual Mike Loveday photo competition was held. The winner of the 2019 award was Bob Gough with his photo of the Woodford Railway Museum BF No. 5 departing Howard Street crossing Currie Street into Mill Street in Nambour in 1998. The locomotive was on its yearly visit for the Nambour Sugar Festival. Photo: Bob Gough

The Woomera Spur stretches across a featureless landscape. In the almost four miles between Pimba and Woomera West, there were only two curves, both of 60 chains radius. Owing to a shortage of material, the line was unballasted when it opened and it was gradually ballasted as supplies of crushed stone became available. Photo: National Archives of Australia, Series D874, Control Symbol NB45

Rails to Woomera

by Mark Langdon

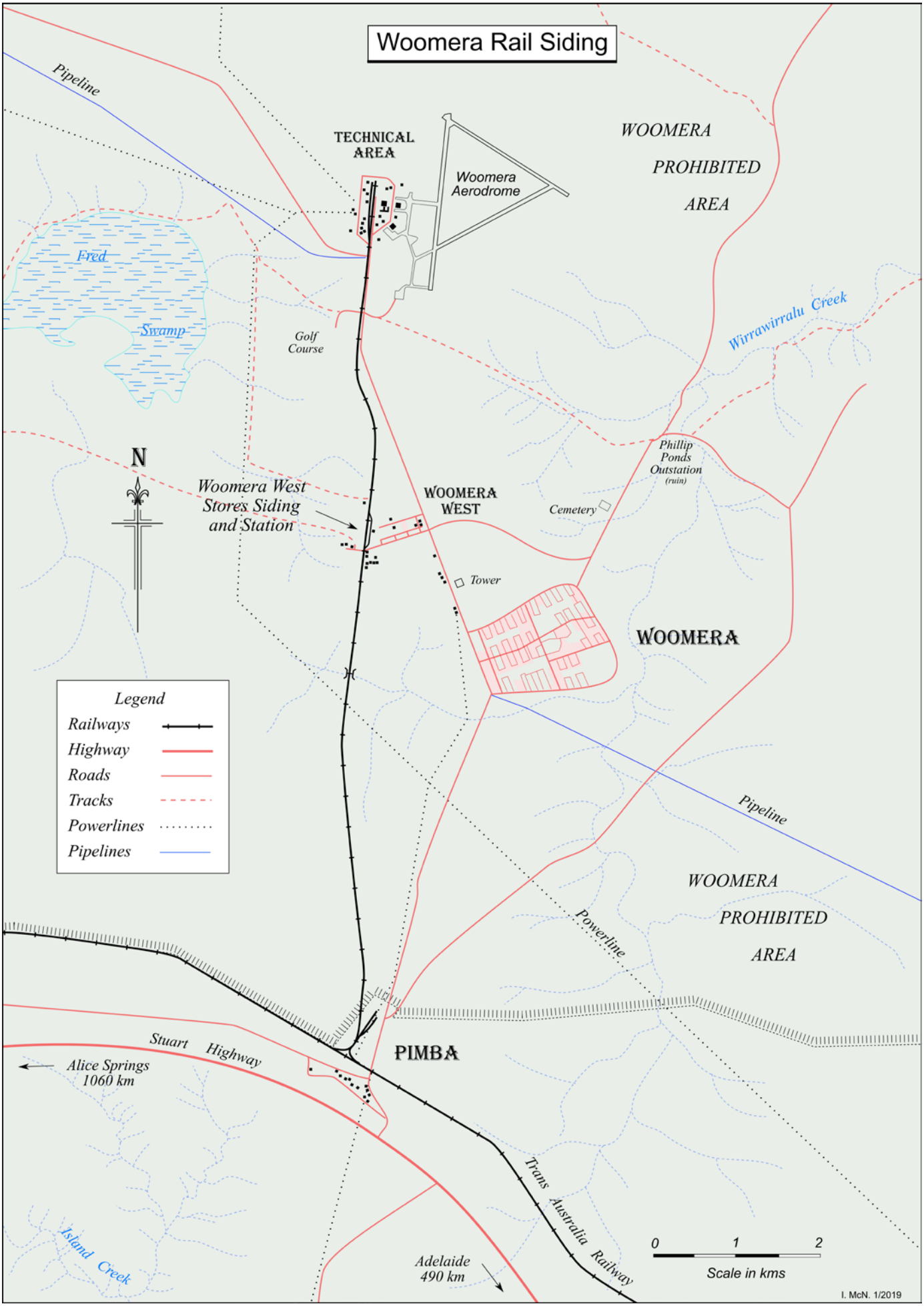
In late November 1946, the Australian and United Kingdom governments reached agreement on "providing facilities in Australia for research and development work on guided missiles and supersonic pilotless aircraft." Part of these facilities was to be a 500 kilometres long experimental range.[1] This range was to be located in South Australia and the site selected for the range head was 14 kilometres from Pimba railway station and township on the Trans-Australian Railway. A completely new township, called Woomera, was to be created near the range head and a railway spur constructed to link Woomera to Pimba.[2] A new organization, called the Long Range Weapons Establishment (LRWE), was established to supervise the project. The Woomera spur was described as "a private siding, maintained by or on behalf of the Commonwealth Department of Works and operated by" the Commonwealth Railways.[3]

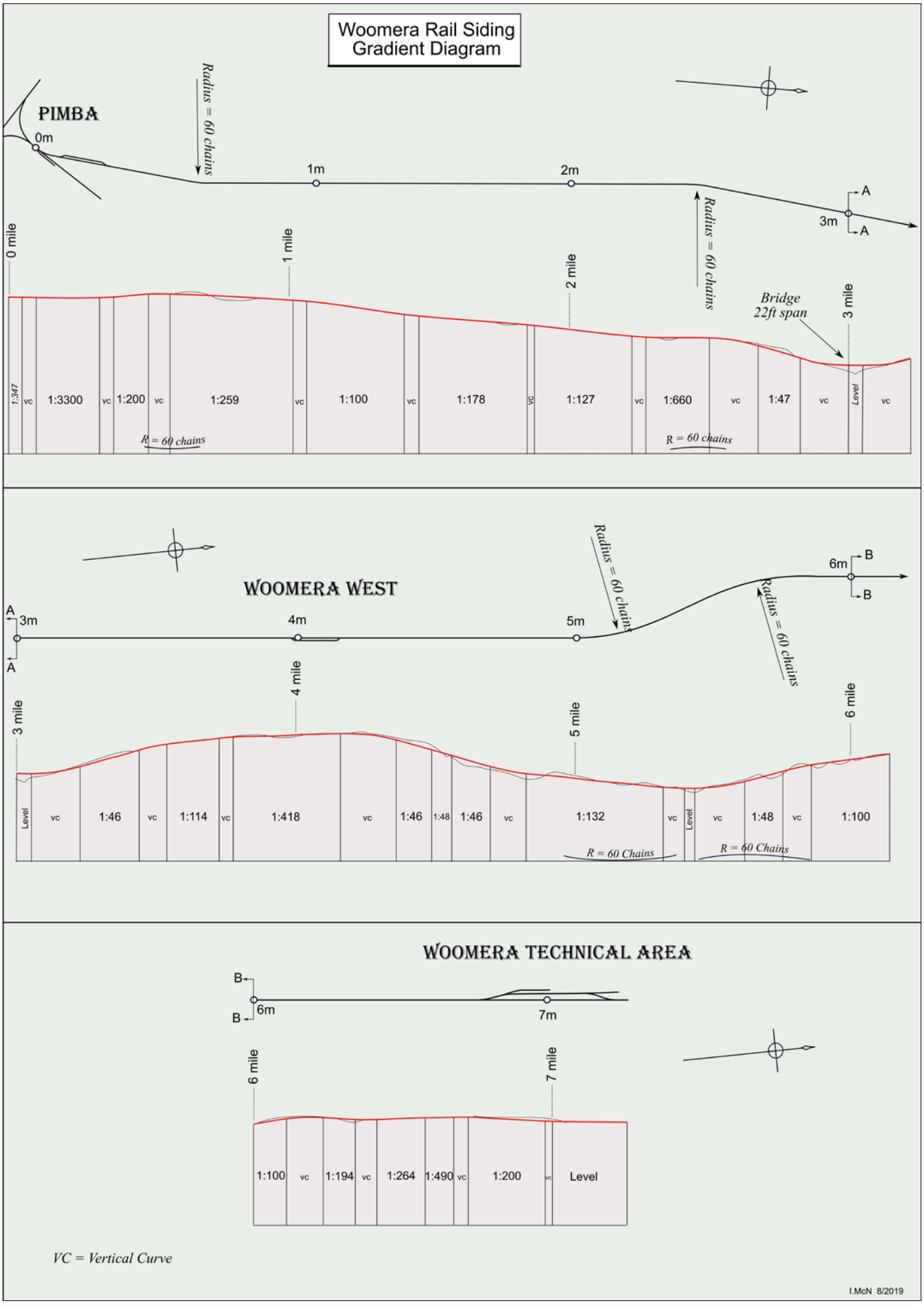
Construction of the spur

Planning for the spur commenced in May 1947. It was originally proposed that the spur would "commence at Pimba Railway Station on the Transcontinental Railway, and proceed in an approximately northerly direction to the technical site on the west of the airfield, being approximately 8 miles, thence in a north easterly direction to the launching site – a further distance of 11 miles."[4]

In the Technical Area, sidings would be built to serve the power house, assembly hanger, general store and the project garage.[5] It was also proposed to erect "a loco-shed over the two-track siding adjacent to the Power House." Ten thousand pounds was allocated for the construction of this shed, but the funds were redirected[6] and the shed was never built and the shunting locomotive was stored in the power house, on a siding that passed through the end of this building.[7]

"At the launching site one siding will be required for the launching platform itself, the terminal of the line being in the form of a complete circle or loop to reach certain fuel stores."[8] The launching site would be in the centre of this balloon loop.[9] In November 1947, the proposed extension of the railway





from the Technical Area to the launch site was cancelled and designing of the railway was only to be completed to the "12 mile peg."[10]

There was only one major structure on the spur, a bridge 3 miles 1 chain from Pimba.[11] A second bridge was planned at 11 miles from Pimba on the line from the Technical Area to the launching Site and both bridges were to be a standard 22' span girder bridge. The steel girders for both these bridges were ordered,[12] but, after the railway to the Launching Site was cancelled, only the 3 mile bridge was constructed.

The Royal Australian Air Force's No.2 Airfield Construction Squadron, was given the task of constructing the earthworks for the spur.[13] During July 1947, the squadron moved to Pimba where it established its camp.[14] Tracklaying was carried out under the supervision of a Commonwealth Railways' ganger.[15] The junction for the spur was located "immediately north of the points to the coal stage in the Pimba station yard." By October 1947, twenty-four chains of the spur had been completed and a loop siding, 1000 feet in the clear, had been constructed immediately to the north of Pimba. Material destined for Woomera would be unloaded at this siding[16] and the siding became unofficially known as the "Woomera Loop."[17] The railway was completed as far as the main stores area, four miles from Pimba, in June 1948 and, on 29 June, the first train load of goods for Woomera was run over the line. However, the siding, 600 feet long, was too short for this train and six wagons had to be left at Pimba until the first part of the train was unloaded.[18]

By the end of the following month, tracklaying had been completed as far as the six mile peg, but at this point work was temporarily halted owing to a shortage of the new 82 lb/yd rails that were being used on the spur.[19] In order to complete the spur as quickly as possible, approval was given[20] to use second hand 80 lb/yd rails as a substitute for the 82 lb/yd rails.[21] Tracklaying to the end of the line at 7 miles 6 chains from Pimba, was completed in November 1948,[22] but it was not until early March 1950, that it was reported that "all work on this spur line, with the exception of the end loading ramp is now complete. To date the section between Pimba and the Department's Main Stores area has been inspected and passed, but the section from the Main Stores to the Technical Area has not yet been passed."[23] At the end of March, it was announced in the Commonwealth Railways Weekly General Circular that "the Technical Area sidings at Woomera are available for use."[24]

The Woomera shunting locomotives

To operate the spur it had been suggested, in May 1947, that two locomotives "probably of the diesel type, capable of pulling two (2) trucks at a time" would be required.[25]

In October 1947, the Machine Tools and Liquidation Directorate, Department of Munitions, offered four diesel locomotives for disposal. These locomotives were General Electric 44-ton diesel electric locomotives,[26] manufactured at Schenectady in the United States. Designed to be a "light road and switching" locomotive, the type had been introduced in the United States in 1940. They were fitted with two, 190 hp Caterpillar diesel engines and weighed 44 American (short) tons (39 Imperial long tons).[27] They were numbered 7920 to 7923 in the United States Army Transportation Corp numbering system,[28] with General Electric Builders Nos. 17938 – 17939 and 17933 – 17934.

These four locomotives had been supplied by the United States during the Second World War as part of the Lend Lease program. During 1942, the Australian government had been informed that twelve standard gauge diesel electric shunting locomotives "were available for quick delivery".[29] On 30 September 1942, the Ministry of Munitions had submitted a Lend Lease requisition for four diesel electric locomotives.

General Electric 44-ton locomotive no.7922, photographed on 17 January 1944. It is still in original condition. The cab did not fit within the New South Wales Railways rolling stock gauge and had to be modified. It is also fitted with automatic couplers, which were replaced by hook and buffers by the New South Wales Railways, but automatic couplers were again fitted by the Commonwealth Railways.

Photo: State Archives & Records N.S.W. Series 17420, Item 486/8

7921 (left) and 7922 (right) stored in the Commonwealth Railways' Yard at Port Augusta. The two locomotives spent almost three years stored at Port Augusta until they were purchased by the Commonwealth Railways in August 1950. To the left of the locomotives is one of the ex-Canadian National Railways 'H6c' class locomotives that was acquired by the Commonwealth Railways during the Second World War.
Photo: National Railway Museum, Port Dock, Photograph no. 7-1074-b002-08

It was proposed that three of these locomotives would be used at the St Mary's explosives filling factory and the fourth would be used at the Rutherford ammunition factory.[30] These two factories were due to open in April[31] and October 1943 respectively.[32] Therefore, it was requested that these four locomotives be delivered by "January 1st, 1943 and in four separate shipments."[33]

The four locomotives did not arrive in Sydney until November 1943[34], and they were erected by the New South Wales Government Railways (NSWGR) and were modified by being fitted with "Standard Westinghouse Air Braking equipment, strengthening of bogies for buffer impact and cabin alterations to conform to 4'8½" gauge limitations."[35] The four locomotives were ready in July 1944, but only one was now required for use at St Marys and none at Rutherford. The remaining three were rented to the NSWGR.[36] After the Second World War ended, there was a rapid closure of the wartime munitions factories and the St Marys factory had been closed by December 1945.[37] The St Marys locomotive was then also offered to rent by the NSWGR.[38]

The NSWGR was interested in acquiring these locomotives as it had previously considered obtaining the remaining eight locomotives of the twelve offered to Australia. On 2 October 1942 the NSWGR had submitted a Lend Lease requisition for the locomotives and the NSWGR had proposed that they would be used "in the various main railway yards throughout the system. They will facilitate and speed up shunting operations at Darling Harbour, Enfield, Alexandria, Sydney Yard and the various border transfer stations."[39] However, this requisition was cancelled as the NSWGR subsequently decided that, as these locomotives had "a very limited tractive effort (..) they cannot be used to displace engines of a type which will give an advantage sufficient to justify their importation from overseas."[40]

The Commonwealth Railways' Assistant Chief Mechanical Engineer, J S Smith, carried out an inspection of the locomotives and he advised that these locomotives "should prove satisfactory for working conditions at the L R W Woomera site, and as diesel mechanics will be employed for Power House maintenance, and therefore available for mechanical service with these units", as he considered that their routine maintenance was an important issue.[41]

As well as the Weapons Research Establishment, and the New South Wales Government Railways, the Commonwealth Railways had also offered to purchase some, or all of these locomotives. The Commonwealth Disposals Commission decided, in November 1947, to allocate two Locomotives to the WRE, owing to the project's "urgent need of locomotives" and two to the NSWGR. The NSWGR had offered £10,000 per locomotive, while the Commonwealth Railways had offered only £5,000 per locomotive.[42]

The two locomotives allocated to the LRWE were nos. 7921 and 7922[43] and they departed Sydney for South Australia, via Albury, on 3 April 1948.[44] At Albury the two locomotives standard gauge bogies were removed and replaced with 5 ft 3 in gauge "standard Victorian engine tender bogies."[45] From Albury they travelled to Port Pirie Junction, where they arrived on 4 May, and they were again fitted with their standard gauge bogies. Departing Port Pirie, one locomotive "was utilised to haul the other" and they arrived at the Commonwealth Railways' Port August Workshops on 6 May.[46]

Because the Commonwealth Railways was considering purchasing diesel locomotives, it wished to use the two locomotives "to carry out certain experiments" so as to gain experience with this type of locomotive. On 1 July 1948, the Commonwealth Railways was informed that the "Long Range Weapons Project has advanced to such a stage that use can be found almost immediately at Pimba in shunting

trucks of material from Pimba to the contractor's store on the Woomera spur line. Because of this it will be necessary for one (1) locomotive to be used on the project at an early date."The Commonwealth Railways would be able to use the second locomotive until it was required at Woomera.[47]

The Commonwealth Railways responded that "to enable experience to be obtained with the diesel locomotives for trial purposes, it was essential that the two locomotives be utilised together in traffic and one locomotive is of no use on main line work for the experimental purposes required." Therefore, the Secretary of the Commonwealth Railways instructed the Chief Mechanical Engineer to deliver the two locomotives to Woomera "at the earliest possible date."[48]

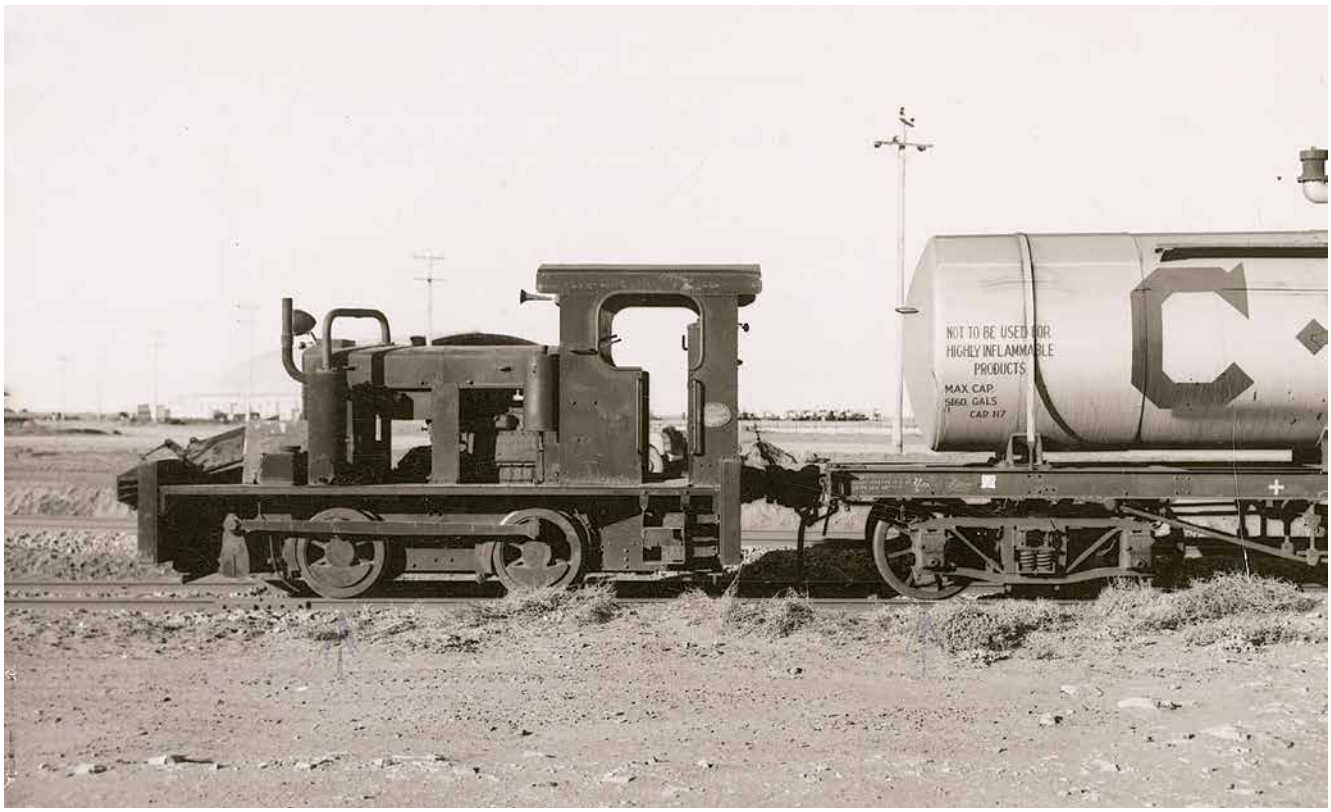
However, when Alan Bouch, the Project Engineer at Woomera, was informed that the locomotives were to be delivered, his response was that "he had no advice that the locomotives were being forwarded and so far as he was concerned he was quite satisfied with the present arrangements and could see no advantage in having the Diesel Locomotives" at Woomera.[49] Therefore, the two locomotives remained stored at Port Augusta.

By mid-July 1947, a diesel locomotive manufactured by John Fowler & Co. in England had been obtained to shunt the Woomera spur.[50] This locomotive was Fowler's builder's number 22905.[51] A 60 hp locomotive weighing 15 tons, it had originally been delivered to the United Kingdom Ministry of Supply for the War Office on 9 December, 1943.[52]

While the two General Electric locomotives languished at Port Augusta, the Commonwealth Railways had offered to hire them for £130 per year each, however, the Department of Supply requested £800 per year. An amount that was rejected by the Commonwealth Railways.[53] On 27 June, 1949, a national coal strike commenced that would last until 15 August 1949[54] and, on the day that the strike commenced, the two locomotives were placed into service by the Commonwealth Railways, "only during the present acute coal shortage."[55] By July, the two locomotives were "being utilised to their full extent and run three return trips per week to Woomera.[56] The locomotives continued in service after the strike had ended and 7921 made its last run on 22 October 1949 and 7922 on 29 October 1949, with the locomotives having travelled 7,957 miles and 7,110 miles respectively.[57]

The overhaul of the Fowler locomotive by the Commonwealth Railways was completed in October 1949 and it was stated that it "should be in first-class condition."[58] It was proposed that the Fowler locomotive be transferred to Woomera, under its own power, on 19 December 1949.[59] However, before it could be placed in service at Woomera, the Commonwealth Railways' Chief Traffic Manager had stipulated that a set of catch points had to be installed in the siding at Woomera "and that the Fowler diesel be confined to the section beyond that point without first obtaining authority from the Stationmaster at Pimba."[60] It was not until early March 1950, that the Commonwealth Department of Works and Housing agreed to this arrangement[61] and, therefore, it was not until 27 March 1950, that the Fowler locomotive arrived at Woomera and it was officially taken over on 13 April.[62] At Woomera the Fowler locomotive was driven by Defence Force personnel.[63]

On the same day that the Fowler locomotive was delivered to Woomera, a meeting of the Main Works Committee was held in Melbourne, where one of the topics discussed was the operation of the spur. When it was constructed the original "intention was that the Commonwealth Railways would put trucks for Woomera on a siding at Pimba and the two diesel locomotives belonging to the Department of Supply would haul them to the Technical Area.



John Fowler & Co. diesel locomotive B/No.22905 was delivered to Woomera in March 1950. It was photographed on 28 July 1950 at the Technical Area Delivery Siding, after it had been damaged by the Commonwealth Railways during shunting at the siding. Wagons consigned to the Technical Area were delivered to this siding by the Commonwealth Railways and then shunted into the technical area by the Fowler locomotive. Photo: National Archives of Australia, Series D250, Control Symbol 56/1092 Part 1

The stores siding at Woomera West photographed on 17 May 1949. General stores consigned to the Department of Works and the township were delivered to this siding. Photo: National Archives of Australia, Series D890, Control Symbol S1/554

A new proposal was now under consideration for the Commonwealth Railways to take trains to the boundary of the Technical Area and to hand them over there so that they could be taken into the Technical Area by the small Fowler locomotive. The two diesel locomotives would not then be required and could be sold. If this proposal was approved, a new siding would have to be constructed at the boundary of the Technical Area together with catchpoints. The present sidings were too far away for convenient shunting."[64] Construction of a loop siding, 900 feet in the clear, outside of the Technical Area was approved the following month[65] and the siding was referred to as the Technical Area Delivery Siding.[66]

With the Fowler locomotive capable of handling the shunting required at Woomera, the Commonwealth Railways made an offer to purchase the two General Electric locomotives for £10,000 each, "plus [the] charges incurred in the transfer of the locomotives from St Marys to Port Augusta."[67] The two locomotives were officially purchased by the Commonwealth Railways in August 1950, and were used as shunters at Port Pirie Junction and Port Augusta.[68] These two locomotives, that had been 'urgently needed' by the LRWE, had only seen four months service during the almost three years that they had been owned by the LRWE.

The two General Electric locomotives were initially renumbered DE91 and DE92 by the Commonwealth Railways, however, in October 1950, the Secretary for the Commonwealth Railways wrote to the Chief Mechanical Engineer stating that "no doubt it has since been noted that as the numbers of the 10 Macarthur locomotives under construction terminate at 89, the Diesel Electric locomotives should be numbered 90 and 91 respectively."[69] The two locomotives were therefore renumbered DE90 and DE91. Australian National Railways called tenders for the purchase of the two locomotives in 1986 and they have both been preserved, with 7921 (DE90) at the Rail Museum, Thirlmere[70] and 7922 (DE91) at the National Railway Museum, Adelaide.

On 28 July 1950, the Fowler locomotive was involved in a shunting accident at Woomera. The locomotive was left standing in the loop at Woomera while its crew went to lunch. During this time, a Commonwealth Railways train shunted some tank cars into the loop.[71] The Superintendent at Woomera claimed that the tank cars had come into "violent contact" with the Fowler locomotive, while the Commonwealth Railways' Chief Traffic Manager claimed that "they were coupled to the engine in the ordinary manner. The engine was pushed a few feet forward after the tank wagons were coupled to it in order to place the tanks in clear of the points."[72] However, the damage to the Fowler locomotive included the rear engine mounting bolts being sheared off, the rear casting to which the rear buffer was attached, being fractured and a number of other parts being fractured and distorted.[73] The debate over who should pay for the repairs to the Fowler locomotive continued into 1951.[74] The Fowler locomotive was involved in another shunting accident on 11 March 1952, when it pushed a tank wagon into the powerhouse doors.[75]

In December 1965, the Fowler locomotive was offered for sale and it was stated that "a complete rewire is necessary" and that the "engine is partially stripped." Offers to purchase the locomotive had to be lodged by late February 1966.[76] In *Light Railway News* No.22 (June 1981), over fifteen years after the locomotive was advertised for sale, it was discovered, in 1981, in the Simsmetal scrap yard in Wingfield, South Australia. How long it had been here is unknown and its final fate is unknown.

The Fowler locomotive was discussed in *Light Railway News,* No.27. There was confusion about the identity of a locomotive that had been at Clyde Oil Refinery in Sydney in 1951.[77] The locomotive at Clyde could not have been Fowler builder's number 22905, as the reports in the National Archives clearly place this locomotive at Woomera.

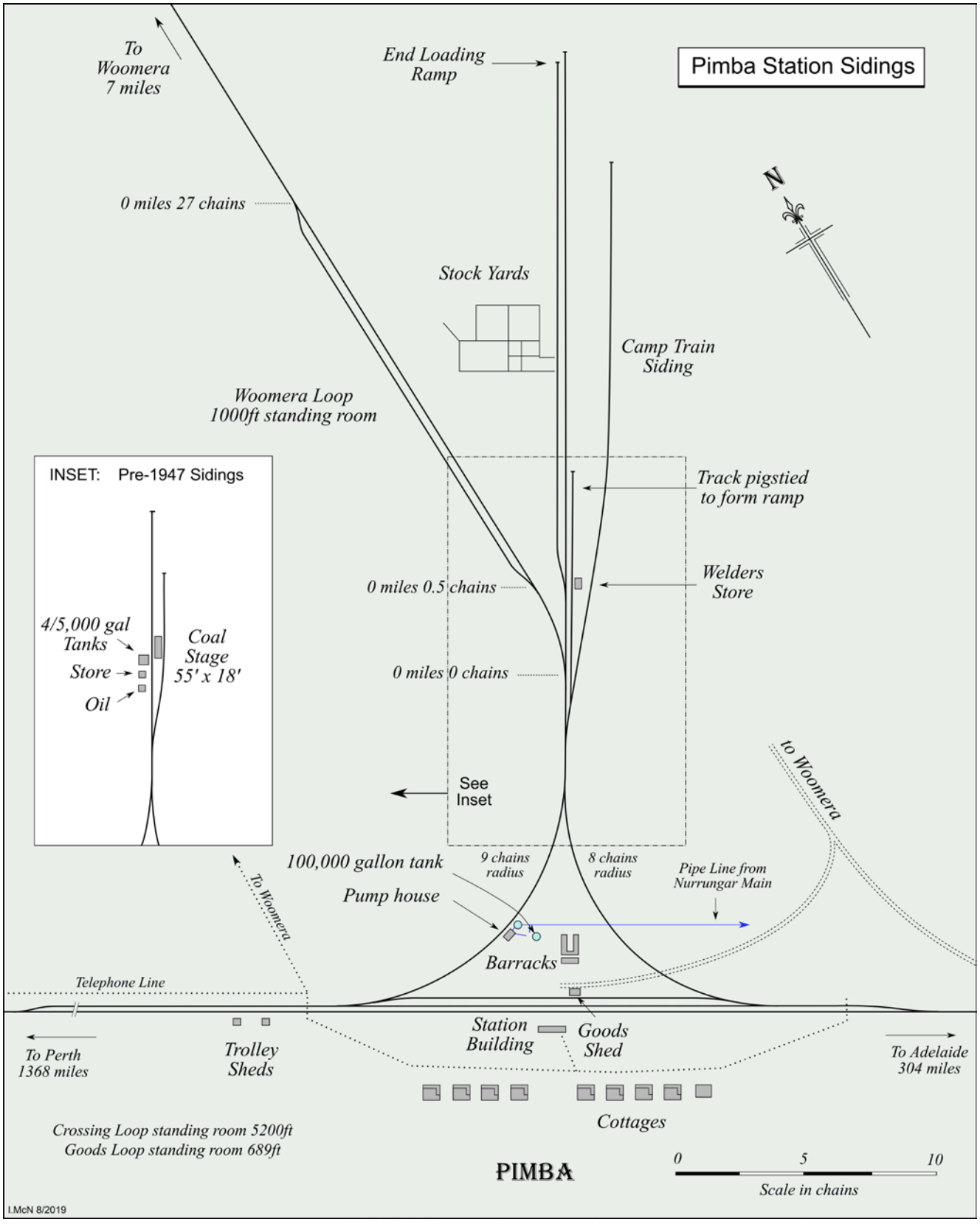
The Woomera spur 1950 to 1978

The Woomera Spur was described as commencing "from the apex of the triangle at Pimba station, and it extends northwards for 6 miles 53 chains, with siding accommodation as follows:

1. Stores siding (Department of Works ETC) Woomera West 3m 76ch to 4m 11ch (loop siding) […]
2. Technical Area sidings (Department of Supply) 6m 33ch to 6m 53ch. […] A choke block […] is provided 60 yards outside the outermost facing points: viz outside the security fence of the Technical area."

For safeworking purposes, the Woomera spur was "a separate block section from the northern end facing points on the old goods siding at Pimba to the choke block 60 yards outside the facing points at the Technical Area. […] The normal authority to enter the section [was] a brass staff inscribed "Woomera Spur Line," which also carries the key to the Stores Siding."[78]

The spur line had been built with the intention of serving the range. However, Woomera had grown to a township of 3,500 people by early 1951,[79] and extra railway facilities were provided to serve the town and its population.



The platform at Woomera West photographed on 1 September 1969. The original station building, completed in 1956, is on the right hand side of the photograph. In the centre of the photograph is a second station building, erected at an unknown date prior to October 1964, that contained a waiting room, toilets and an office for the police. Photo: National Railway Museum, Port Dock, Photograph no. 17841

In late April 1948,[80] the Commonwealth Railways had instigated a special goods train service "from Port Pirie to Pimba for the purpose of transporting Personnel, goods, perishables and parcels to Pimba for the Long Range Weapons Project." Two trains a week were scheduled to depart Port Pirie at 11.15pm on Mondays and Thursday and arrive at Pimba at 7.14am on Tuesdays and Fridays.[81] The return services departed Pimba at 10.15pm on Tuesdays and 9.30pm on Fridays.[82]

The "Woomera Special", as these trains were nicknamed, provided the only passenger service from Pimba as the return services connected with the eastbound *Transcontinental* at Port Pirie.[83] After complaints from Woomera, the eastbound *Transcontinental* was scheduled to stop at Pimba on Wednesdays and Saturdays, while the westbound *Transcontinental* stopped at Pimba on Mondays, Wednesdays and Fridays.[84]

"Constant representations were [being] made by the Long Range Weapons authorities and local residents for better accommodation and more frequent train services."[85] Therefore, in late 1950, the Commonwealth Railways purchased three railcars from the Budd Company in the United States,[86] specifically to provide a "fast frequent service […] at a cost much below the cost of steam train services"[87] from Port Augusta to Port Pirie, Pimba and Tarcoola.[88] They entered service in April 1951 and originally terminated at Pimba. In the following month it was proposed to extend the service to Woomera,[89] but it was not until March 1952 that approval was given to extend the service to Woomera.[90] The first railcar service to Woomera "slipped in silently and unheralded to Woomera West Siding" on Monday, 17 March 1952. The new service was described as "another milestone on the road to progress" by the *Gibber Gabber*, Woomera's "Weekly Bulletin of Information to Woomera Residents."[91] The railcar arrived at Woomera at 2.50 am on Monday mornings and 4.26pm on Tuesdays and Fridays. It departed at 4.45am Mondays, Wednesdays and Fridays.[92]

Another problem was the lack of station facilities at Woomera. Early in 1954, the Commonwealth Railways' Chief Traffic Manager "requested that better facilities for the issuing of tickets be provided at Woomera West Railway Terminal." In response, the LRWE proposed to build a small station building "with timber framed walls covered with cement asbestos and roof covered with corrugated galvanized iron."[93] It was not until December 1954, that the expenditure of £1,355 for the building was approved.[94]

Construction of the station building commenced in early 1955. Originally the building was to consist of a ticket office 10 ft by 8 ft and a waiting room 16 ft by 10 ft, but construction was halted when the postal authorities requested the inclusion of a room for the storage of mail. A mail room 10 ft by 10 ft was then included in the building and construction resumed in October 1955 and the station was finally completed in January 1956. The station building was set back 75 ft from the railways line[95] and the station area was floodlit and surrounded by security fencing, with a gate into the car park.[96]

A second station building was erected at Woomera at an unknown date prior to October 1964. This building contained a waiting room, toilets and an office for the police. The original building was then referred to as the "S.M.'s Office."[97]

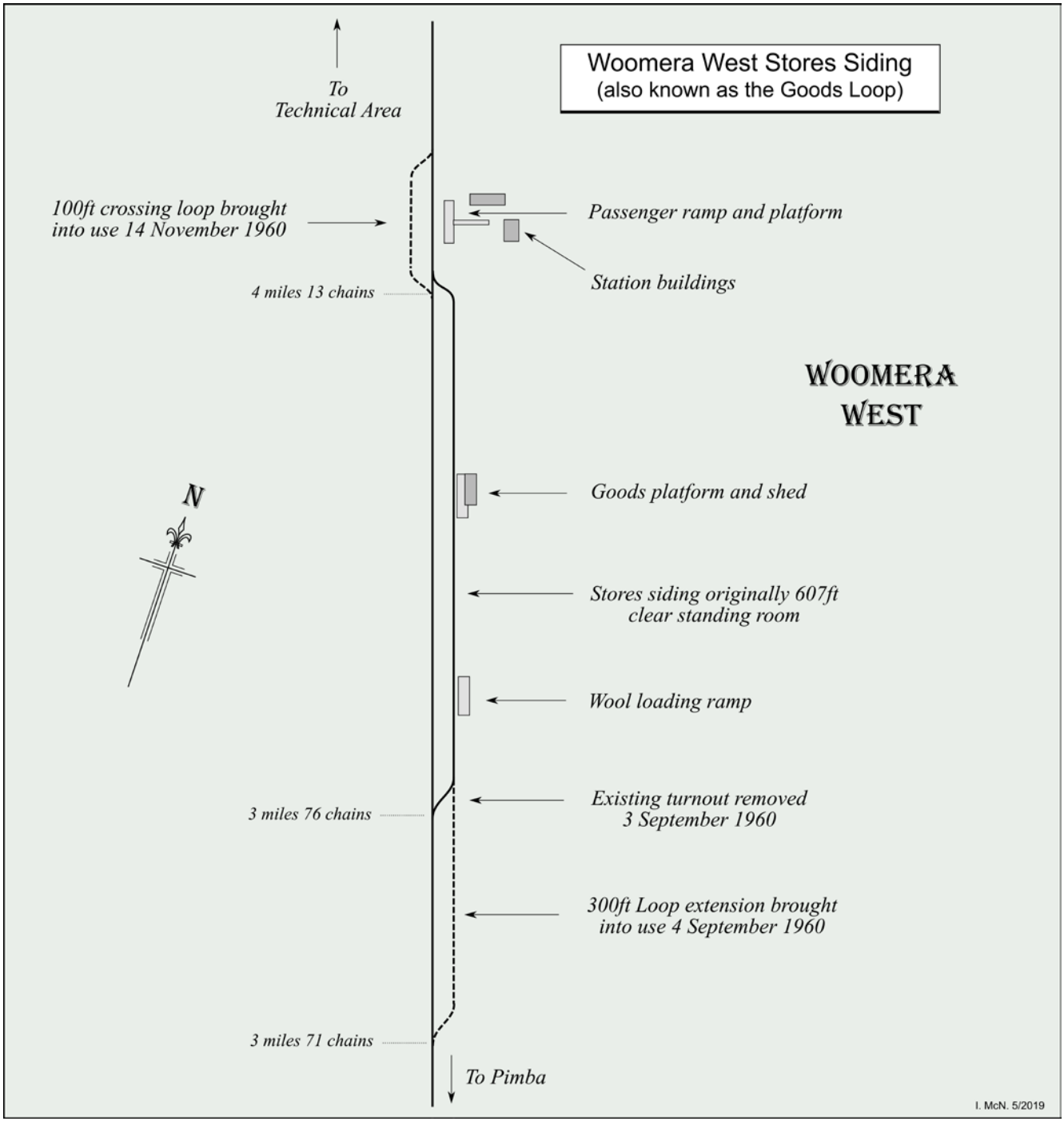
After the station building had been completed, the Commonwealth Railways complained about the lack of a platform, as this caused delays in the "entraining and detraining of Budd car passengers."[98] It took over three months to design the requested platform[99] and it was not until March 1957, that tenders were called for the "supply fabricate delivery of steelwork for railway platform" at Woomera West.[100] In late 1961 "the provision of an overhead shelter for passengers joining or alighting from Budd railcars at Woomera was

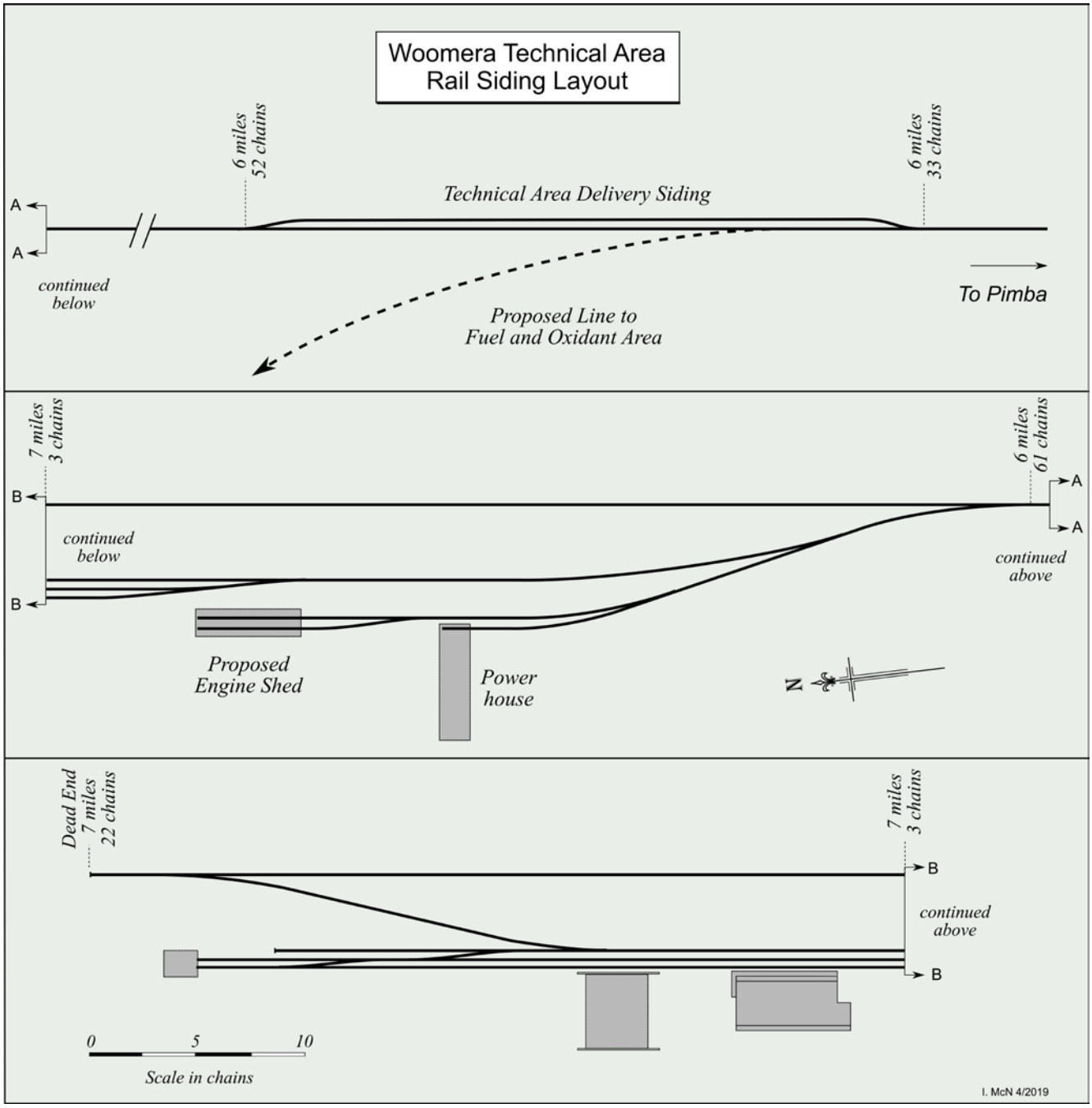
being considered and the Chief Traffic Manager of the Commonwealth Railways wrote "if this is so, it may be possible to incorporate a small canopy over the platform under which parcels traffic could be placed.[101] Eventually a very small canopy was erected on the platform.

With the extension of the Budd railcar service, a problem unique to Woomera arose. Woomera was a "prohibited area" and all visitors had to be security checked and in possession of a pass to visit it.[102] Each train service was met by a "peace officer", who stood at the door of the railcar checking the passes of the arriving passengers. This was the reason for the security fencing surrounding the station area. This meant that it could take 20 minutes for the passengers to disembark from the railcar.[103] The solution was for the peace officer to drive to Pimba, where they would join the railcar and check passes on the trip from Pimba to Woomera.[104]

At first any parcels, or Less than Car Load traffic destined for Woomera was unloaded at Pimba, which caused "a good deal of inconvenience" and the Commonwealth Railways was requested to provide a goods shed at Woomera to solve this problem.[105] In late 1958, it was recommended that a goods shed be erected at Woomera near the railway station.[106] The shed was 30 ft x 20 ft and it was erected "using materials from a shed no longer required, at Woomera airfield."[107] It was completed in October 1959.[108]

Woomera West was an unattended siding and the Commonwealth Railways refused to accept liability for any material that went missing between Port Pirie and Woomera West. Therefore, early in 1957, W T Haslam, the Director of Works, requested that the Commonwealth Railways "would consider arranging for the siding at Woomera West to be an attended one."[109] As there was no residential accommodation available in Woomera for any station staff, the Commonwealth Railways initially did not agree to opening Woomera West as an attended station.[110] Unless the LRWE could provide transport between Pimba and Woomera West for the station staff.[111]





On 5 January 1959, Woomera was opened as an "attended Accounting Station"[112] and the Assistant Station Master (ASM) from Pimba travelled daily to Woomera West to man the station.[113] Shortly afterwards, on 23 February 1959, Pimba was closed as an accounting station, with Pimba being supervised by the Station Master (SM) at Woomera.[114] The SM and ASM had to live in Pimba and travel to Woomera. The SM, who worked day shift, could travel to and from Woomera on the school bus. For the ASM, who worked night shift, special travel arrangements had to be made.[115]

The closure of Pimba also brought about a change in safeworking on the spur, with Train Order working being introduced on the spur, starting on the day that Pimba was closed.[116] Although referred to as Woomera, the official name of the station was Woomera West and it retained this name until 23 October 1966, when it was officially renamed Woomera.[117]

Finding housing for the SM and ASM became an issue, because the Commonwealth Railways could not purchase land for housing in Woomera Village and this created legal problems for the Commonwealth Railways.[118] There was also a twelve month waiting period for married quarters in Woomera.[119] The land ownership issue was referred to the Deputy Crown Solicitor and then became tied up in the issue of control and ownership of the spur.[120] It was not until late 1962, that two blocks of land in Gilghi Street in Woomera were acquired and houses were erected on the blocks in the following year.[121]

On Wednesday and Friday nights, the Budd railcar had a Brill trailer attached that had to be shunted prior to the departure of the railcar. Shunting of the trailer was originally carried out using a tractor. There was also an increasing amount of goods traffic coming into Woomera and the goods loop was unable to handle all the incoming wagons. It was proposed to extend the Stores Siding (goods loop) using material recovered from the abandoned "Woomera Loop."[122] Therefore, during 1960, the Stores Siding was extended by 300 feet at its southern end[123] and a new loop siding, 100 feet in the clear, was constructed at its northern end. Officially called the 'Crossing Loop', it was built opposite the station building and on the opposite side of the mainline from the goods loop. It was brought into use on 6 November 1960.[124]

Ownership of the spur line

The Commonwealth Railways Act stated that "all railways and rolling-stock constructed or acquired by or on behalf of the Commonwealth" should be "vested absolutely" in the Commonwealth Railways Commissioner. Therefore, the question arose in late 1963 as to whether or not the spur should be transferred to the Commonwealth Railways.[125] The issue was referred to both the "Deputy Crown Solicitor, Adelaide and the Assistant Crown Solicitor of the Crown Solicitor's sub-Office at Department of Supply Head Office, Melbourne" and it was not until almost four years later, in May 1967, that it was decided to transfer "the railway and associated structures" to the Commonwealth Railways.[126]

Decline in traffic

In the first six months of 1975, there had "been a considerable reduction in the number of passengers and volume of parcels traffic conveyed to and from Woomera." Therefore, the Commonwealth Railways decided to cancel the mid-week Budd railcar service to Woomera in July 1975, leaving only the two weekend services on Friday and Sunday night.[127] In late 1975, "the funds available for the Australian National Railways [as the Commonwealth Railways had been renamed] had been severely cut and to ensure services would operate within the budget, severe pruning of uneconomical services must be brought into operation as soon as possible." Therefore, the Budd railcar services to Woomera and Whyalla were to be terminated.[128] In November 1975, the ASM's position at Woomera was abolished[129] and the twice weekly Budd railcar service to Woomera was cancelled on 14 March 1976.[130] It was announced that the service was cancelled owing to "high running cost and poor patronage."[131]

After the cancellation of the Budd railcar services, it was stated that there would "not be any alterations to the present goods train services to and from Woomera."[132] Between 1975 and 1977, the population at Woomera declined from 4,300 people to 2,800. By late 1977, inwards goods traffic to Woomera had fallen to only two partly loaded covered vans and one or two rail tank wagons loaded with distillate weekly. However, the Woomera Administration was planning to have the distillate delivered by road tanker, rather than by rail, with the new arrangement due to be in place by March 1978. A F Lucarotti, the Woomera Area Administrator, wanted to have the spur closed in order to stop paying the $10,000 yearly maintenance cost. The Australian National Railways had no objections to closing the spur, "subject to the concurrence of the Australia Defence Services."[133] The Australian National Railways proposed to close the spur on 1 March 1978, but the Department of Defence did not respond until mid-February 1978, requesting that "the spur line […] be available if needed for Australian services major exercises and […] that it be maintained to a level which will enable it to be used for the Services relatively isolated requirements."[134] Owing to the late response by the Department of Defence,[135] the closure of Woomera station for business was postponed until 1 April 1978[136] and the spur line between Pimba and Woomera was closed on 1 July, 1978.[137]

It appears that the last time that the spur was used was during late 1980, when defective wagons were stored on the spur owing to bans at the Australian National Railways' Port Augusta workshops.[138] However, the final fate of the Woomera Spur was still not decided. In response to a request from the Commonwealth Department of Housing and Construction, it was estimated, in early March 1982, that it would cost $1,320,000 to repair the spur using concrete sleepers, or $1,090,000 to repair it with timber sleepers.[139] The rail and sleepers along the line were eventually removed at an unknown date.

Acknowledgements

I would like to acknowledge the assistance of the staff at the National Archives of Australia offices at Adelaide and Sydney, and the staff of the State Records of South Australia. I would also like to thank Ian McNeil for creating the drawings that accompany this article and Gabrielle Sexton of the National Railway Museum, Port Adelaide for finding Woomera photographs in the museum's collection.

The Woomera Spur today. The railway formation is gradually returning to the desert.
Photo: Mark Langdon

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Abbreviations used in the references

AGPS Australian Government Printing Service, Canberra
CR WN Commonwealth Railways – Weekly Notice
fwc = for week commencing CTM = Chief Traffic Manager
ANR WN Australian National Railways Weekly Notice
LRWP Long Range Weapons Project
NAA 1NAA Series D156, Control Symbol 1947/575
NAA 2NAA Series B300, Control Symbol 8788 Part 1
NAA 3NAA Series D250, Control Symbol 56/1092 Part 1
NAA 4NAA Series D156, Control Symbol 1956/382
NAA 5NAA Series D618, Control Symbol SD1200
NAA 6NAA Series D618, Control Symbol SD2698
NAA 7NAA Series D156, Control Symbol 1957/667
NAA 8NAA Series B300, Control Symbol 9729
S = Series; CS = Control Symbol

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Industrial Railway NEWS

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

QUEENSLAND

FAR NORTHERN MILLING PTY LTD, Mossman Mill

(see LR 270 p.30)
610 mm gauge
Com-Eng 0-6-0DH *Mossman* (B1719 of 1957) and the Gemco sleeper renewer (R854 of 1987) were seen alongside the Cook Highway in the Killaloe area on 1 and 13 November. Com-Eng 0-6-0DH *Cook* (AL3372 of 1964) was in attendance at bridge works at Cassowary Creek on 13 November and Com-Eng 0-6-0DH *Douglas* (AL2562 of 1963) was likewise at Miallo Creek on 21 November.
Gregorio Bortolussi 11/19

ISIS CENTRAL SUGAR MILL CO LTD

(see LR 270 p.30)
610 mm gauge
On 6 November, Isis Mill shareholders voted in favour of the Pakistan based Almoiz Group acquiring an up to 54% shareholding in the mill. Construction of the new line to Booyal and Duingal was seen to be well under way on 16 November. A number of ex QR wooden bridges are still extant along the route and it is not known if these will be reused or replaced. Owing to dry weather and poor growth, the trial cane plot at Byrnestown near Gayndah was not harvested for milling this year, instead being cut for cattle feed.
BundabergNow website 6/11/2019; Brian Bouchardt 11/19; Ben Glossop 11/19

MACKAY SUGAR LTD, Mackay mills

(see LR 270 p.30)
610 mm gauge
Marian Eimco B-B DH 19 *Narpi* (L256 of 1990) was seen working in the Brightley/Mia Mia area on 13 October. Marian Mill's Clyde 0-6-0DH *Bassett* (67-596 of 1967) had been sent to storage at Racecourse Mill by late November.
Tom Badger 10/19; Mitch Zunker 11/19; Daniel Dutton 11/19

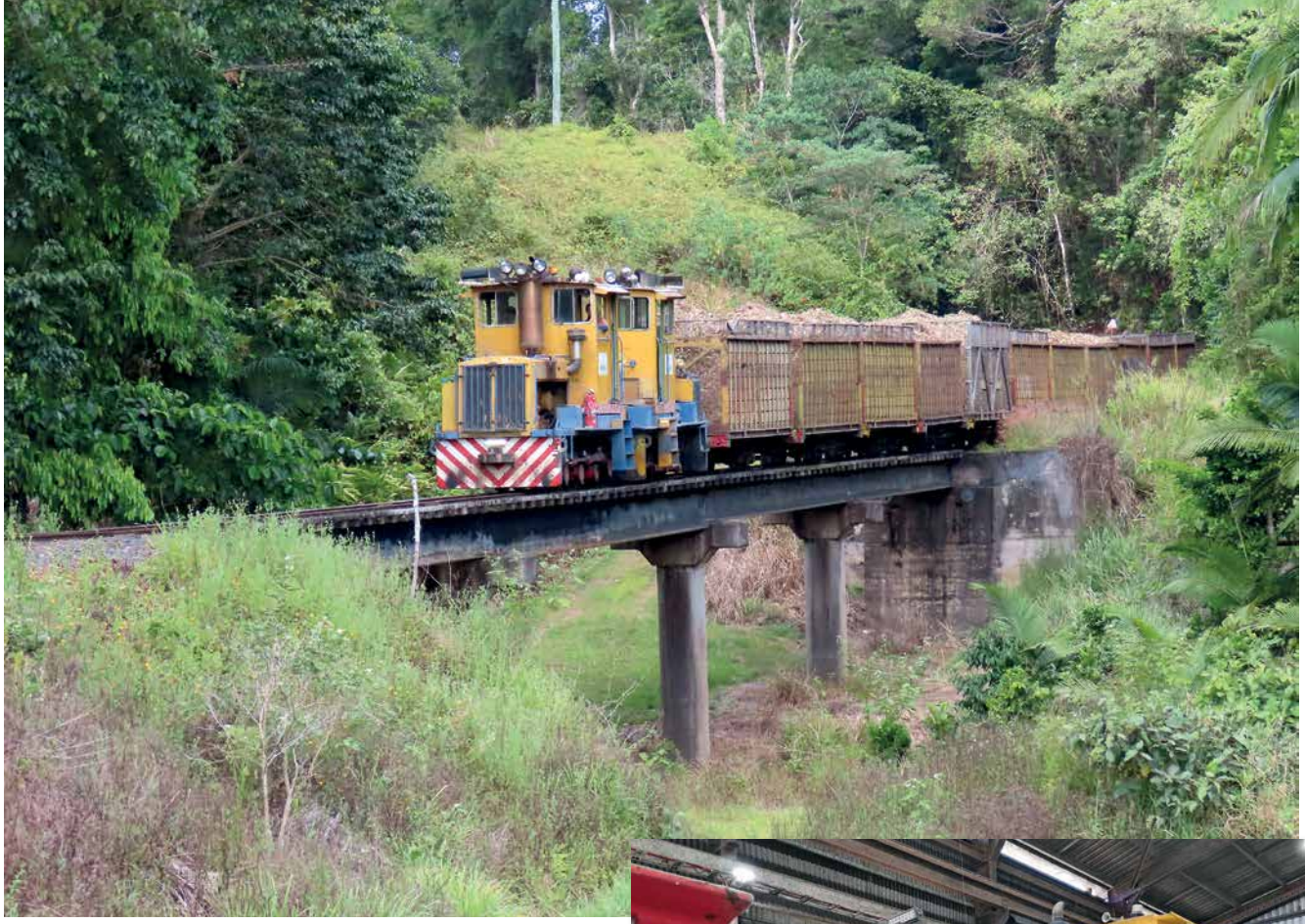
MSF SUGAR LTD, Mulgrave Mill

(see LR 270 p.30)
610 mm gauge
At some time between late August and mid-October, there was a swap over between Clyde 0-6-0 DH locos 13 *Hambledon* (64-316 of 1964) and 19 *Redlynch* (65-435 of 1965) at the Redlynch depot with the former spending the rest of the crushing there for workings north of Redlynch. The latter was based thereafter at the mill. By 15 November, Clyde 6 wheeled brake wagon 19 (CQ1319 of 1969) had been taken away from Clyde 0-6-0DH 16 *Kamma* (56-96 of 1956) and paired up with Clyde 0-6-0DH 19 *Redlynch*. During the evening of 5 November, a rake of forty 10 tonne full bins being hauled over the Brinsmead Gap on the Redlynch line by presumably Walkers B-B DH *Gordonvale* (595 of 1968 rebuilt Bundaberg Foundry 1995), broke away from the loco. The EM Baldwin 6 wheeled brake wagon 13 (7065.4 6.77 of 1977) at the trailing end was unable to hold the load by itself on the steep grade and a runaway ensued. The brake wagon and seventeen bins derailed spectacularly on curves near the bottom of the grade. Twenty-four hours after this incident, a car ran into a train of fulls at Robert Road in Bentley Park, a southern suburb of Cairns.
Com-Eng 0-6-0DM 5 (A1005 of 1955) returned from bridge inspection duties on the South Johnstone Mill rail network on 22 November. The highway between Edmonton and Gordonvale is to be duplicated, beginning early in 2020. This will involve the following changes to the parts of the Mulgrave Mill rail system in the vicinity. Realignment of the line at Hall Road, siding adjacent to Djarragun College to be removed, new sidings at Maher Road, Deppeler Road, Maitland Road terminus and at the railway overpass.
Gregorio Bortolussi 8/19, 10/19, 11/19; Andrew Sues 11/19; ABC Far North 6/11/2019; TropicNow website 6/11/2019; 7News Cairns 6/11/2019; 7/11/2019; Department of Transport and Main Roads website; John Browning 11/19

MSF SUGAR LTD, South Johnstone Mill

(see LR 270 p.30)
610 mm gauge
By 1 November, a new sanding facility had been constructed at the loco servicing point at the mill and the old sand shed demolished. Com-Eng

Mossman Mill's Com-Eng 0-6-0DH Mossman *(B1719 of 1957) and the Gemco sleeper renewer (R854 of 1987) on re-sleeper duties alongside the Cook Highway on 1 November. Photo: Gregorio Bortolussi*



Above: *On 23 October, Mossman Mill Com-Eng 0-6-0DH multi-unit locos* Ivy *(AL4181 of 1965) and* Cook *(AL3372 of 1964) at Cassowary Creek with the last rake of fulls from Killaloe for the 2019 crushing season. Photo: Gregorio Bortolussi* ***Right:*** *South Johnstone Mill's Clyde 0-6-0DH 12 (55-60 of 1955) jacked up in the loco shed with its final drive removed on 12 November. Photo: Jason Sou* ***Below:*** *Mulgrave Mill's Com-Eng 0-6-0DH 26* Meringa *(AK3675 of 1964) prepares to pull fulls out of a siding along Parry Road on 19 November while Clyde 0-6-0DH 19* Redlynch *(65-435 of 1965) hovers in the background and the harvester cuts cane in the adjacent paddock. Photo: Gregorio Bortolussi*

0-6-0DM 5 (A1005 of 1955) which had been on bridge inspection duties, returned to Mulgrave Mill on 22 November.
Gregorio Bortolussi 11/19; Andrew Sues 11/19

RIO TINTO ALCAN, Weipa
(see LR 270 p.30)
1435 mm gauge
The ATSB has released a preliminary report on the rear end collision at the Andoom bauxite loading station on 22 September. Multiple types of brake applications by the driver of Downer EDI Co-Co DE R1006 (08-1764 of 2009) failed to slow his train enough to avoid a collision which occurred at a speed of 37 km/h. The cab was knocked from its mounts, was substantially damaged and came to rest on the ground. The investigation is continuing.
Australian Transport Safety Bureau report published 21/11/2019

TULLY SUGAR LTD
(see LR 270 p.30)
610 mm gauge
Com-Eng 0-6-0DH 17 (AH52100 of 1966) was with the mill's four ballast hoppers and the ballast plough at Rockingham on 7 October. The three EM Baldwin 0-4-0DH locos reportedly still see occasional use on navvy duties.
Luke Horniblow 10/19

WILMAR SUGAR (HERBERT) PTY LTD, Herbert River Mills
(see LR 270 p.30)
610 mm gauge
Macknade Mill's Clyde 0-6-0DH 11 (65-383 of 1965) was transferred to Proserpine Mill on 14 October. Victoria Mill's Plasser KMX-12T tamping machine (445 of 1998) was sent on loan to Proserpine Mill on 15 October. EM Baldwin B-B DH *Gowrie* (7135.1 7.77 of 1977) was transferred to Victoria Mill on 24 November after spending the crushing at Macknade. This loco was promptly stripped down to the bare frame and is to be rebuilt at Proserpine Mill during the 2020 slack season including the fitting of a new cab. Clyde 0-6-0DH *Lucinda* (65-436 of 1965), EM Baldwin B-B DH *Darwin* (6171.1 9.75 of 1975) and the *Darwin's* Clyde 4 wheeled brake wagon BVAN 4 (CQ3426 of 1975) went to Victoria Mill from Macknade Mill on 5 December. The *Lucinda* was returning after being on loan to Macknade and the *Darwin* is to have some slack season maintenance performed at Victoria. Macknade's Clyde 0-6-0DH *Canberra* (65-433 of 1965) was transferred to Proserpine Mill on 10 December. EM Baldwin B-B DH *Selkirk* (6750.1 8.76 of 1976) arrived at Macknade on transfer from Kalamia Mill on 10 December. Victoria's Walkers B-B DH *Victoria* (599 of 1968 rebuilt Tulk Goninan 1994) and the Chinese bogie brake wagon built in 2015 left on transfer to Plane Creek Mill on 10 December. On 19 October, Victoria Mill's Hudswell Clarke 0-6-0 *Homebush* (1067 of 1914) ran passenger trains on the Nyanza line as part of the festivities associated with the annual Maraka Festival. On 7 December, it ran passenger trains at Macknade Mill for the social club's annual Christmas party. After overnighting at Macknade, it returned to Victoria to do the same there for that mill's social club's Christmas party on 8 December. Five refurbished Herbert district ballast hoppers were transferred to the Burdekin region on 3 December. As well, the ballast plough built on the frame of Motor Rail Simplex 4wDM (10381 of 1953) was transferred there at some stage in 2019. Three hundred and fifty 11 tonne bogie bins are being built at the Wilmar workshop in Ingham for the 2020 crushing season. They will be assembled at the Macknade Mill truck shop. Macknade Mill's EM Baldwin B-B DH 20 (7070.4 4.77 of 1977) is to be fitted with new AD6A final drives this slack season, replacing its AD5 final drives. These were possibly the last of this type left in use in the sugar industry.
Gregorio Bortolussi 10/19; Editor 10/19, 11/19, 12/19; Steven Allan 12/19

WILMAR SUGAR PTY LTD, Inkerman Mill, Home Hill
(see LR 269 p.37)
610 mm gauge
Clyde 0-6-0DH *Kalamia* (67-569 of 1967) was on loan from Invicta Mill from early November and was still here on 10 November. Com-Eng 0-6-0DH D8 (FC3777 of 1964) was transferred here from Plane Creek Mill on 9 December.
John Marano 11/19; Luke Horniblow 11/19; Luke Axiak 12/19

WILMAR SUGAR (INVICTA) PTY LTD, Invicta Mill, Giru
(see LR 269 p.37)
610 mm gauge
Clyde 0-6-0DH *Kalamia* (67-569 of 1967) went on loan to Inkerman Mill in early November and was still there on 10 November.
Luke Horniblow 11/19; John Marano 11/19

WILMAR SUGAR (KALAMIA) PTY LTD, Kalamia Mill
(see LR 270 p.30)
610 mm gauge and 610 mm + 1067 mm dual gauge
During the crushing season, 1067 mm gauge Walkers B-B DH 5803 (682 of 1972) is used to load molasses containers for shipper Pacific National. EM Baldwin B-B DH *Selkirk* (6750.1 8.76 of 1976) was transferred to Macknade Mill on 10 December.
Luke Horniblow 11/19; Editor 12/19

Tully Mill Com-Eng 0-6-0DH 17 (AH52100 of 1966) with the mill's four ballast hoppers and ballast plough stabled at Rockingham on 7 October. Photo: Luke Horniblow

WILMAR SUGAR PTY LTD,
Pioneer Mill, Brandon
(see LR 270 p.30)
1067 mm gauge
Following the fire in the bagasse conveyor system on 5 October, Pioneer Mill recommenced operations on 17 October. In the meanwhile, cane from this mill had been crushed at Invicta, Kalamia and Inkerman Mills. Up to three of the stored Walkers B-B DH locos are to be rebuilt at Pioneer Mill for various mills for the 2020 crushing season. 7349 (711 of 1973) was started during 2019 and is expected to be the new *Scott* for Invicta Mill. A start is expected on DH22 (604 of 1969) and another 73 class in 2020.
Luke Horniblow 10/19; Wilmar Sugar Australia 10/19; Kieran Koppen 10/19

WILMAR SUGAR (PLANE CREEK) PTY LTD,
Plane Creek Mill, Sarina
(see LR 269 p.37)
610 mm gauge
On 31 October, Walkers B-B DH QR4 *Carmila* (676 of 1971 rebuilt Bundaberg Foundry 1996) was stationary outbound with empties at the southern end of Zero Loop, Sarina on the main line south while doing a cross with the locotrol train which was in bound with fulls. For some reason, mid train loco Walkers B-B DH 1 *Allan Page* (594 of 1968 rebuilt Bundaberg Foundry 1995) has derailed during the cross and clipped QR4 *Carmila*. Both locos derailed with the cab of 1 *Allan Page* being broken from its mounts. A pile up of fulls took place behind this loco. On 9 December, Com-Eng 0-6-0DH D8 (FC3777 of 1964) left this mill on transfer to Inkerman Mill. Walkers B-B DH Victoria (599 of 1968 rebuilt Tulk Goninan 1994) and the Chinese bogie brake wagon built in 2015 left Victoria Mill on transfer to Plane Creek Mill on 10 December, being unloaded here on 11 December. A new bogie brake wagon is to be built for 1 *Allan Page* at Proserpine Mill during the 2020 slack season. This loco is to be fitted with RSU remote control equipment during the 2020 slack season.
Danielle Shaw 10/19, 11/19; Editor 12/19; Luke Axiak 12/19; Tom Badger 12/19; Bruce Hills 12/19

WILMAR SUGAR (PROSERPINE) PTY LTD,
Proserpine Mill
(see LR 270 p.32)
610 mm gauge
Clyde 0-6-0DH 11 (65-383 of 1965) was transferred here from Macknade Mill on 14 October. Victoria Mill's Plasser KMX-12T tamping machine (445 of 1998) was sent here on loan on 15 October. It has since been seen at work on the system, usually in the company of the Plasser PBR-201 ballast regulator (243 of 1984) and the mill's own Plasser KMX-12T tamping machine (222 of 1981). Clyde 0-6-0DH *Canberra* (65-433 of 1965) arrived here on transfer from Macknade Mill on 11 December. On the same day, Com-Eng 0-6-0DH *Oakenden* (FB3169 of 1963) was sent to storage at Pioneer Mill. A bogie brake wagon is to be built from an ex QR QLX/OSY wagon at this mill during the 2020 slack season for Plane Creek Mill. EM Baldwin B-B DH 9 (6626.1 7.76 of 1976) had been stripped down to frame, motor and transmission by 21 November. It may be receiving a rebuild this slack season.
Editor 10/19, 12/19; Tom Badger 10/19, 12/19; Mitchell Algie 11/19; Peter Crossley 11/19; Luke Horniblow 10/19

Top: *Invicta Mill Com-Eng 0-6-0DH* Northcote *(AH4091 of 1965) with empties along the Hodel line on 3 November. Photo: Luke Horniblow* ***Above:*** *South Johnstone Mill Clyde 0-6-0DH 14 (63-288 of 1963) in the Dickson Road area near Babinda on 8 November. Photo: Gregorio Bortolussi*

NEW SOUTH WALES

GEMCO RAIL, East Greta Junction
(1435 mm gauge)
An NSWGR Chullora Workshops 4wDH numbered X200 was observed here on 4 November. Gemco Rail appears to be involved with wagon maintenance at this site.
John Hourigan 11/19

MANILDRA FLOUR MILLS PTY LTD, Narranderra
(see LR 268 p.40)
1435 mm gauge
Walkers B-B DH 7340 (702 of 1972) was still in storage here in October.
Scott Schofield 10/19

SOUTH MAITLAND RAILWAYS PTY LTD, East Greta Junction
(see LR 263 p.30)
1435 mm gauge
Orenstein & Koppel 4wDH 32 (26263 of 1963) was observed here on 4 November.
John Hourigan 11/19

VICTORIA

AGL HYDRO PARTNERSHIP, Bogong Creek
(see LR 253, p.30)
914 mm gauge
A walk along the Bogong Creek aqueduct on the weekend of 23 and 24 November revealed that all the stored wagons along the line had been removed with a couple left at the rail head. The Ruston & Hornsby 4wDM (296070 of 1950) was stored at the Big River Fire Trail crossing.
Trevor Staats 11/19

OVERSEAS

FIJI SUGAR CORPORATION
(see LR 270 p.32)
610 mm gauge
The following locos were seen at and near Sabeto on the Lautoka Mill rail system during August. Clyde 0-6-0DH 10 (65-437 of 1965) and EM Baldwin 0-6-0DH 20 (3406.1 7.70 of 1970) on rakes of full trucks and 20 and Hunslet 6wDH 21 (9273 of 1987) shunting. As well, 21 and 10 were seen double heading a load of full trucks on the southern outskirts of Lautoka.

A man was found dead south of Nadi on the Navo bridge of the Lautoka Mill rail system on the night of 22 November. He was believed to have been struck by a locomotive while sleeping on the track before the bridge.
Fiji Sun 24/11/2019; Fijivillage website 25/11/2019; Fijian Broadcasting Corporation 25/11/2019; Peter Sansom 8/19

Correction from LR 270

The trailing locomotive in the photo on page 32 of LR 270 is a Clyde, not a Baldwin.

Above: *On 22 November, Mulgrave Mill's Com-Eng 0-6-0DH 7* Highleigh *(B1010 of 1956) and Clyde 0-6-0DH 16* Kamma *(56-96 of 1956) wait at a siding at Vohland Road, Aloomba on the last day of harvesting for 2019. Photo: Gregorio Bortolussi* ***Below:*** *Tully Mill Walkers B-B DH 9 (618 of 1969 rebuilt Tully Mill 2010) shunts at the Stamps Road interchange while an elevating tipper truck fills the empties just delivered on 5 October. Photo: Gregorio Bortolussi*

LETTERS

The Ring River bridge disaster (LR269)

As I am sure all eagle-eyed readers will have noticed, some gremlins got into the caption positions on page 30 of LR 269. The one marked Above should read 'Right'; and the one marked Right should be 'Above'. Meticulous readers may wish to make neat pencil notations in the margin accordingly. Please accept our apologies for the confusion.

Phil Rickard
Ringwood, Vic.
via email

Current light rail operations in Fiji

In August, my wife and I were invited to stay with friends for a week in Fiji. We stayed at their place in Korolevu south of Sigatoka on the main island of Viti Levu.

While we were there, we saw some rail activity. As readers may be aware the cane railways are mostly abandoned from a few kilometres south of Nadi. I understand a bridge was washed out and not replaced. South of Sigatoka we saw little if any evidence of cane growing and not much is grown to the north. However, we did see two tourist operations on part of the abandoned network.

On one occasion, we rode a "train" from a point between Cuvu and Voua to Sigatoka. I am not sure how far that is but, by road it took about twenty minutes. The brochures said the train would take an hour. The manager said the trip would take an hour and a half. What we saw in the yard did little to inspire confidence. The train we were to ride on consisted of a small four wheel diesel locomotive, I think it was a Simplex, and one carriage which was an open wagon with a roof and some seats. In the yard were about four carriages in various states of decay. There was also another diesel locomotive. I think it was built by Hudswell Clarke. We got going and the rate of progress was such that the local kids were able to run up behind the train and jump on the back. This happened a couple of times. In each case the driver stopped the train and shouted at them to get off. The train made frequent stops so the driver and his mate could shovel dirt and sand off the track.

On another occasion when the train stopped, I looked out and noticed a chain had fallen from under the locomotive. The driver and his mate worked on the locomotive for about twenty minutes, but I could not see what they did. On two occasions, the leading wheels on the locomotive derailed because of sand or stones on the track. In each case chocks and wedges were used to get the loco back on the rails. There were two scheduled stops; one was at the National Park, the other was at a kindergarten. In the end the trip took two and a half hours! All up six passengers were on the train. They were lucky to get that many!

The following day, we were going to Lautoka. On the way we stopped at Cuvu where we saw the former locomotive depot. The depot is now used by a group called Ecotrax. It runs bicycles along the line to a beach a few kilometres to the north. The bicycles consist of one or sometimes two bicycles on a four wheel under frame. This was a much better run operation than the train and it was much better patronised. The owners said they wanted to take over the train so they could run their bicycle tours to Sigatoka.

Later that day as we approached Nadi we saw evidence of cane railway operations with loaded whole stalk wagons in sidings. Between Nadi and Lautoka we saw two cane trains at Sabeto. At Sabeto a loaded train, being hauled by a Baldwin, was arriving while a Hunslet was waiting in a siding. A few hundred metres ahead another train being hauled by a Clyde HG-3R was waiting. Some shunting took place after which both trains were amalgamated and the HG-3R and the Hunslet double headed to the mill.

Later we stopped at the mill at Lautoka. We did not see much activity, although a large number of trucks were waiting to discharge their loads of cane. I am told that the trucks can wait up to twelve hours before unloading. North of the mill, we saw a train without a loco on a siding. More than half of the train consisted of bins. This was the only place where we saw bins in use. I suspect a break down had occurred at the mill as no trucks or cane wagons were being unloaded and the train we saw several hours earlier had still not arrived, although we did see it on the outskirts of the town.

It would seem there is still plenty to see for the rail enthusiast in Fiji. However, we were told the sugar industry is in a state of decline. I would not like to say what the future holds for the sugar industry or the cane railways, but if anyone wants to see and photograph rail operations in Fiji, I would suggest not leaving it too long.

Peter Sansom
Kahibah, NSW
via email

Research register - Editorial (LR 269)

I refer to the editorial in LR 269 regarding the preparation of a register of what research is being undertaken by LRRSA members and readers.

I think the idea is excellent and I, for one, would be happy to contribute to it. The idea was suggested decades ago in the era before we had the internet, but now the current communication technology might actually allow it to prosper. I suggest using either the society groups.io site, the LRRSA website, or in *Light Railways* magazine, but NOT Facebook.

Jim Longworth
via email

Editor's note

Thanks for your letter and support Jim, it is very much appreciated. I had originally envisaged having it on the LRRSA website, where it would be readily available, but that would be flexible. I would be very interested to hear from any other readers on this matter.

Research register - Editorial (LR 269)

As Research Editor, I have contemplated a research register over the last few years, but always put it off in case it turned into a minefield of differing opinions and interests. Now that the Editor has 'let the cat out of the bag', it's time to embrace the idea and

The tourist train, hauled by a Simplex 4wDM, after iarrival at Sigatoka, two and a half hours after leaving Cuvu. Photo: Peter Sansom

see if it can work to our mutual benefit.

I was concerned that some people might get upset by being 'locked out' of a research area if others had noted their interest in researching that area, but it is probably best to address this if it occurs rather than do nothing. People might join forces and work together on researching and publishing or possibly divide the task and create more content. It is more likely that sharing of information will be enhanced by this register; it is a strength of *Light Railways* researchers that sharing among individuals is generally seen as a positive concept.

How to keep such a register up to date is another thing, how do we know if a person is still actively pursuing a completed article or has placed the project on the shelf, or just retired from research? These will be some of the issues for the editorial team to take on board when constructing the register, so the more comment received from the membership, the stronger the end product will be. There is a fair bit to consider with such a register, but maybe 'publish and be damned' is a good start.

As part of this register, it would also be great to have a list of what areas have yet to be researched, or have not been explored in recent times. Some areas of interest have been published in other magazines, such as the ARHS *Bulletin* and others have been published in *Light Railways* many decades ago but may well benefit from modern research sources and images that have become available since. My area of interest, Port Kembla breakwater, has been previously published by Giff Eardley in the *Bulletin* in the late 1940s. I see Jim Longworth's article in LR269 starts off with exactly the same introduction. Ian McNeil wrote a summary of NSW breakwater tramways for LR245 to try and flush out some more willing researchers (we did get the Jervis Bay article from this, so a good outcome). Who knows, maybe people are writing on these breakwaters right now, this is where a register could be useful.

Stuart Thyer
Research Editor
via email

Weston Langford photos of Queensland cane locomotives (back page LR 269)

I would like to add some extra information to the photos on the back cover of LR269. The Perry locomotive ended up at Dreamworld via Bruce McDonald and I drove it and the Baldwin locomotive from 1986 to the end of 1988 as per my article, which has been submitted for publication in *Light Railways* in the future.

The Perry was donated to ANGRMS at Woodford where it is now with wheels and axles removed for one new tyre replacement and refitting, I am one of the restorers of this locomotive. The Perry locomotive arrived at Woodford on 6 November 2014 and the photo shows Mark Gough oiling it after its arrival. Mark also drove the Perry and the Baldwin at Dreamworld. Mark is the project leader with the restoration of the Perry at Woodford.

The water tank in the photo taken by me is also at Woodford and while working at Aitkin Transport Pty Ltd I drove a crane truck and ANGRMS had this tank donated to the Society and I had the crane truck sitting where the "*Eudlo*" is situated in the photograph. The object was to dismantle the tank.

I do hope that this information can help advise your readers where these items have retired to.

Bob Gough
Convenor LRRSA SEQ Group
via email

Beaconsfield Tramway (LR 269)

I am writing to add a few notes to Jim Longworth's interesting article on the Beaconsfield tramway in LR 269. As Jim noted, the tramway had an unusually long twilight, extending from the closure of the gold mine in 1914 to the final demolition around 1929. This seems to have been due to hopes that some British manufacturer would acquire the mine buildings and tramway to set up an Australian subsidiary (thus avoiding Australian import tariffs) and also to the need to carry machinery and scrap metal from the mine to Beauty Point for shipment.

In February 1922 the Tasmanian parliament approved a special lease to free the liquidators of the Tasmania Gold Mining Company from the requirements of the Mining Act. This was intended to save the mine buildings from demolition in the hope that they would be taken over for a new purpose. If this had not happened by 1927 ownership of the land would revert to the government (*Hobart Mercury* 13 February 1922 and 9 September 1922). Hopes for a new user of the tramway lasted until at least 1924. An article and photo of the mine buildings in the *Mercury* of 22 July 1924 noted that it was connected to the Tamar River 'by the Tasmania Mining Company's own railway line' and a report by the liquidators in September 1924 referred to 'the company's own railway' (*Mercury* 5 and 26 September 1924).

The tramway was also used intermittently to remove machinery from the mine. The Mercury of 29 October 1918 noted the transport of machinery to Beauty Point by tram. In December 1920 the liquidators reported that machinery sales were coming to an end, the company's remaining assets consisting mainly of the mine buildings, the slime dump and land on the Tamar River (*Mercury* 23 December 1920). However in January 1927 the Tambar (Tasmanian Government shipping service) carried 200 tons of machinery from Beaconsfield to Strahan for delivery to the Federation tin mine located between Zeehan and Trial Harbour (*Mercury* 19 and 21 January 1927). In 1926 the Public Works Department considered buying the tram rails for use in relaying the Marrawah Tramway, but decided instead to buy rails from the Tasmanian Government Railways (Tasmanian Archives and Heritage Office, file PWD 243/1/33). There was a final sale of mine machinery on 16 October 1929 and about six weeks later the Union Steamship freighter *Kamo* sailed from Beauty Point to Newcastle with about 150 tons of scrap metal from the mine (*Mercury* 17 October and 13 December 1929).

The tram lines on Beauty Point wharf were modified during the 1920s. In October 1919 a parliamentary committee found that 'The old portion of the jetty [ie that closest to the shore] is in a very bad state. Indeed, the position is so serious that the Marine Board has been compelled to forbid its use by the Tasmania Gold Mining Company's locomotive…' (Tasmanian Parliamentary Papers, vol 81, paper 37 of 1919). By August 1921 the old part of the jetty was being rebuilt and the jetty extended at its outer end (*Mercury* 6 August 1921). In January 1922 a report to the Marine Board (*Mercury* 1 February 1922) recommended 'The tram line through the shed…should be removed, as it no longer answered a good purpose. The wharf was now wide enough…to allow carts straight into the shed, and thus save extra handling on and off the trucks. The line would be in the way of men trucking from shed to ship. The line in front of the shed would serve all purposes required. He recommended that the portion of the tram line from the inside of the shed to the junction be taken up.' The outer portion of the wharf was progressively extended from the mid 1920s so that overseas fruit ships could load into four hatches simultaneously.

Jim Stokes
via email

Heritage & Tourist News (LR 270)

I get frustrated with reports that have missing vital information as per the one re the Buderim Tramway regarding the Krauss locomotive. It would be helpful to include the builders number for those with no direct access to this information.

The Queensland Pioneer Steam Railway (QPSR) recently took delivery of C17 761 4-8-0 Walkers 422/27 from Mitchell. While many valuable items were removed by so called 'preservationists' for use elsewhere, the locomotive is in a better condition than the previous C17 996 4-8-0 Walkers 533/53 that QPSR acquired for Southport.

The Perry 0-4-2TOC 265/25 *Kilrie* passed its boiler exam and is slowly being overhauled and re-assembled. PB15 448 4-6-0 Walkers 93/08 still continues, though the recent state of emergency saw diesel 1616 EE(Aus) A051/61 deputising. By the time this letter is in print it is expected that AC16 221A 2-8-2 BLW 69456/43 will be back on loan from Ipswich.

David Rollins
via email

The Neilson twins (LR 208 & 212)

A letter from the late John Shoebridge in LR 212 was a follow-up up on his article in LR 208 about the Neilson locomotives of the Newcastle Coal & Copper Company. In his letter, John mentioned that he had formed the view that the photographs of a saddle tank locomotive that appeared in his article did not show one of the Coal & Copper Company's Neilsons, which by then he knew were primitive-looking "box tank" engines.

The two saddle tank photographs were taken at Morison & Bearby's works at Carrington in Newcastle and on the Emu & Prospect Gravel and Road Metal Co Ltd's tramway at Toongabbie, and appeared likely to be of the same locomotive. It seems that John had an idea of a correct identification but was reluctant to proffer it without further information.

I had stumbled across the information needed to make the identification because it featured in another photo in John's article, showing an AA Company Fairbairn locomotive on the bridge that passed over the Burwood Tramway in Newcastle. The visible details of chimney, smokebox door, steam dome and cab side panel all corresponded exactly with the photograph of the locomotive at Morison & Bearby's rebuilt with a saddle tank. The correct identification was one of the twin Fairbairn 0-4-0WT locomotives of 1856, *Barracouta* and *Governor*. I shared this with John Shoebridge, but evidently failed to inform LR readers until now.

The history of the two Fairbairn locomotives after being sold by the AA Co. is very hard to disentangle. One was seen in 1879 at J & A Brown's works at Minmi under overhaul following its purchase by James Russell ("of the cranes").[1] It was presumably used by Russell for coal loading operations at the port of Newcastle. The other is said not to have been sold by the AA Company until about 1884.[2] A Fairbairn locomotive that had been used in the construction of Prospect Reservoir was advertised for sale

Ex QR locomotive C17 761 at Box Flat for the Queensland Pioneer Steam Railway. Photo: David Rollins

on behalf of the deceased contractor (James McGuigan) freshly overhauled at Henry Vale's works at Auburn in May 1889.[3] It seems that this locomotive could not have been in use at Prospect before 1886.[4]

The Ralph Snowball image of the saddle tank locomotive at Morison & Bearby's could not have been taken in 1877 as suggested in LR 208, because Snowball did not arrive in Newcastle until 1880, beginning his career as a photographer in 1885.[5] John Shoebridge suspected that it was in May 1895 based on his interpretation of the photographer's notes. The saddle tank locomotive arrived at Toongabbie in or about March 1902 and was said to have come from Wagga.[6] If this is correct, it suggests that it had been used in the Riverina by the Public Works Department on the railway construction job between The Rock and Lockhart. That line opened in July 1901. The Toongabbie locomotive is said to have been scrapped in 1913.[7]

There is other circumstantial information that might relate to one of the Fairbairn locomotives under the ownership of James Russell and his successors but it is not known whether the second locomotive was rebuilt with a saddle tank nor for how long it lasted. Any further information would be welcome.

John Browning
Annerley, Qld

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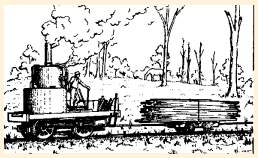
Tour of Morts Dock Historic Site, Balmain, Sydney

A tour of Mort's Dock and Engineering Co. Ltd. site at Balmain was held by the NSW Division on Saturday 31 August, 2019. Twenty people attended the tour, which was hosted by David Jehan, with the assistance of Mark Langdon. Approximately half the group were non-members, many were descendants of workers at the dock. Participants were given a map showing where all the various parts of the dockyard were and what they did.

Mort's Dock opened in March 1855 and was the brainchild of Captain Thomas Stephenson Rountree and industrialist Thomas Sutcliffe Mort. Although primarily focused on ship repair and building, the engineering works engaged in the construction of steam locomotives, ship machinery, mining equipment and steel pipe. The Mort's Dock and Engineering Company was formed as a public company in 1872 and was incorporated with limited liability in 1875. In 1901 the company opened a second dry dock and slipway at Woolwich to cater for commercial vessels and ferries. The company finally closed on 12 November 1958 and the Balmain site was later cleared for a container terminal, it is now a waterfront park.

After the walking tour, the participants adjourned to the Dry Dock Hotel, which was established in 1857, for lunch. The walls of this pub display many photos of the dockyard in operation and it is well worth a visit. *David Jehan*

The tour group at Morts Dock on 31 August 2019. *Photo David Jehan*



LRRSA NEWS

MEETINGS

ADELAIDE: "Middle Eastern railways and Peter Letheby videos"
After the usual business we will see John Meredith's 2019 videos of Middle East rail, and train photos from that region taken by John Goggs. There will also be some Peter Letheby videos. The business deferred from the December meeting will be covered. News of light rail matters will be welcome from any member.
Intending participants would be well advised to contact Les Howard on 8278 3082 or by email lfhoward@tpg.com.au, since accommodation is limited.
Location:
1 Kindergarten Drive, Hawthorndene.
Date: Thursday 6 February 2020 at 7.30pm

BRISBANE: "Taiwan and South Korean railways"
David Rollins will be showing part 2 of a video of the Taiwan and South Korean railways, together with the usual discussions on light railway matters.
Location: Coopers Plains Library, 107 Orange Grove Road, Coopers Plains.
Date: Friday 21 February 2020 at 7.30pm

MELBOURNE: "Gunn's tramway at Crossover in Gippsland"
Mike McCarthy will be presenting details of his extensive research into Gunn's tramway at Crossover near Noojee in Gippsland. Mike will be presenting many historic photos and details of the operations of the tramway.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday 13 February 2020 at 8:00pm

SYDNEY: "The Mount Washington Cog Railway, USA"
A cog railway was opened in July 1869 to climb to the 6,288-foot summit of Mt. Washington in New Hampshire, the highest peak in the north east. It is now designated a National Historic Engineering Landmark. Bill Laidlaw recently visited this interesting railway while leading a RTSA tour and so will present his photos at the meeting. Bill visited other places of railway interest, including the Pacific Harbor Line, which shunts the docks of the port of Los Angeles.
Location: Woodstock Community Centre, Church Street, Burwood. Free Council car park behind building (entry via Fitzroy Street) or close-by street parking. Only 10 minutes easy walk from Burwood railway station.
Date: Wednesday 26 February 2020 at 7:30pm

Maldon Tour, Central Victoria

The Maldon tour was a great success with a personal record of twenty-eight members and friends attending. The temperature was around 20 degrees, which is ideal for this area and a delight compared to the Code Red bushfire alert in the area today, as I write this summary for LR.

The tour began on Saturday morning 16 November 2019 at the Maldon Historic Machinery Museum where we had a guided tour of its numerous period displays. The Museum also houses the nationally significant Thompson's of Castlemaine, drawing and photograph collection which dates from pre-1900 to around 1970. The Museum volunteers provided an excellent lunch, which set us in the right mood for the afternoon's activities.

After lunch, Alan Millar, who is the President of the Machinery Museum, gave us a tour of the Maldon State Battery. This was a Government funded battery built in the 1850's to process ore from surrounding mines. It contains a five head battery, Wilfley table and a Berdan pan in excellent condition.

We then drove over to the Forest Creek goldfields in Castlemaine and Alan showed us the Red Hill Powerhouse. This comprises a short tramway, skip, hopper, several storage vessels and the powerhouse building. The building contains a large twin-cylinder Ruston and Hornsby producer gas engine which was used to pump the high-pressure water for hydraulic sluicing nearby. Outside there are extensive artefacts and interpretative displays of the gold mining in this area.

The members then drove to the Garfield Water Wheel foundations nearby which was the final stop for our activities that day. Most members headed back to Castlemaine and beyond, while others camped at a delightful spot in Butts Reserve, Maldon, with plenty of exotic foods, fine wines and great company.

On Sunday morning 17 November, we met at the Victorian Goldfields Railway station in Maldon for the 10.30 am return trip to Castlemaine hauled by Y133 and J549. After the train journey, the members were able to enter the VGR workshops area and witness J549 being watered and turned around for the next run to Castlemaine. Several lucky members also got to ride in the cab of J549 as it returned to the head of the train, which was a special highlight for them.

After lunch, we met at the Wattle Gully gold mine in Chewton for a guided tour by Jason Fothergill, who is the Principal Exploration Geologist of Castlemaine Goldfields, the company that own this site. This mine has a fascinating history and the artefacts on the site date from the 1930s up to recent times. Whilst there is probably more gold to be discovered on this site, the mine is unlikely to reopen for financial and environmental reasons.

The members were shown the poppet head and mining locomotives first. Then we toured the buildings nearby which included the twin electric winders for the shaft cages, staff amenities, workshop with giant lathe and storerooms. We then walked up to the next level and investigated the battery, which was substantial.

The battery was a twenty head model with four bays of five heads each, but only two bays had complete cams, tappets and stampers. It was made by Jaques Brothers in Richmond, Melbourne and according to Wiki, Jaques was an engineering company founded in the goldrush years (like Thompsons of Castlemaine) and made the tunnel boring machine for the original Melbourne Underground train loop. Also, in the battery were an electric motor to drive the stampers, Wilfley table, Chilean mill and Berdan pan.

The members then climbed to the top level where the more recent gold processing plant was located. There were hoppers, conveyers, ball mill, numerous cyanide tanks, flotation chamber and in one room was an old bank safe with the door prised open, like a Hollywood bank robbery film. Apparently, the previous owners had decided to reprocess the battery tailings, given this plant was able to recover gold at much lower concentrations than the old processes could.

The tour ended around 5 pm when we thanked Jason for the mine tour and the members dispersed to their various homes in Victoria and New South Wales. We had a sensational tour and the unique opportunity to investigate some of the historic sites in the Maldon and Castlemaine areas, not normally open to the public.

Thanks to Rick Oatley for recommending the Maldon Vintage Machinery Museum as a must-see tour destination and for accompanying me on the recce. I am particularly indebted to Peter Thompson and Alan Millar from the Maldon Vintage Machinery Museum for arranging lunch on Saturday and for Alan hosting us at the Maldon State Battery and Red Hill Powerhouse. I am also indebted to Jason Fothergill of Castlemaine Goldfields who provided a guided tour of the Wattle Gully mine and processing plant, at very short notice. And finally, I'd like to thank Paul McDonald and Sharon Martin from the Victorian Goldfields Railway who arranged our train reservations and access to its Maldon workshop area.

Simon Moorehead

Members pose for a group photo at the Red Hill Powerhouse in the Forest Creek goldfield site in Castlemaine. *Photo: Simon Moorhead*

OBITUARY

Peter Letheby

1924–2019

Sadly we report the passing of one of our longest standing members, Peter Arnold Letheby, on 1 November 2019 at age 95. Peter joined the LRRSA in 1967, one of the earliest to join from South Australia, and was present at the first meeting of the South Australian group in 1983, which met in a railcar at the Mile End Railway Museum.

When that railcar was vandalised, various meeting venues were used, including the homes of members. In 1986 Peter offered the theatrette that he had set up in the shed at his home in Royston Park where meetings of the Adelaide Filmo Club were held. This club had been meeting since 1938, and Peter joined it in 1953. He had equipped the theatrette to show several gauges of movie film, sound and silent, and slides, later adding video replay with a large screen TV, and it was air-conditioned – an ideal venue. The LRRSA SA group met there bi-monthly, except for the December meetings in later years, which were held in the theatrette at the home of the late Trevor Triplow, another of our early members, and Peter's long term Filmo friend and a tram enthusiast. Peter made special provision for our group meetings to continue even when he was not at home – in 1973 he joined the Pichi Richi Railway Preservation Society, which meant that at school holiday times he was away at Quorn. In later years he was transported there by Paul Moffatt and from 2004 by Ray King, who remembers that he was a meticulous worker in the restoration shed, with screw slots lined up with the lay of the timber.

Peter Letheby at the Puffing Billy Railway at Belgrave on the occasion of the LRRSA 50th birthday celebrations in 2011. Photo: Les Howard

The last LRRSA meeting at his theatrette was in October 2014 – in the following summer at 90 years of age he was assessed to go into aged care, but continued to come to meetings until June 2016, brought along by Rob Robinson.

He had travelled to England, South Africa, New Zealand and the USA with rail enthusiast groups, and when he came to the 50th anniversary conference of LRRSA in 2011, it was no surprise that when he was given a cab ride on the conference dinner special train, the driver was someone he knew from one of those expeditions.

Peter was also a long-term member of the Australian Electric Transport Museum at St Kilda, just north of Adelaide, where he was given a special driver's certificate for his 80th birthday. Chris Andrews, sometime chairman of the museum says he was very quiet and unassuming, and registered as Peter (PAL) Letheby for a COTMA conference. He worked on the repair and restoration of H 360, the Birney car no. 303, the toast rack tram 42, and on the PRRPS Brill 75 trailer while it was at St Kilda. He made movie films of the activities there and at Pichi Richi, and also of the Hand Ghan – the Kalamazoo trip on the old Ghan route in 1980.

He had also participated in many ARHS SA division rail excursions since the very first one in 1952, and made movies of some of these, though he did not become a member, so far as we know. His films have been deposited with the National Railway Museum at Port Adelaide.

Peter, the youngest child of a National Bank official, never married but lived 90 years at the family home, and was *in loco parentis* for his sister's daughters. He began work at 16 in a drafting office at Finsbury during World War 2, and in 1944 enlisted and became a Leading Aircraftsman in the RAAF. Demobbed at Laverton in 1948, he worked till retirement at WRE - the Weapons Research Establishment (later known as the Defence Science & Technology Organisation, DSTO) at Salisbury, qualifying as a draftsman in 1959 by part-time study begun during the war at the SA School of Mines

Chris Andrews, Les Howard, Ray King

Tour of Woolwich Dock Historic Site, Woolwich, Sydney

A follow-on tour of the Mort's Dock and Engineering Co. Ltd site at Woolwich was held on Saturday 23 November 2019.

Of special interest was the walking trail set up by the local council that allows the public to walk around the perimeter of the 260 metre long graving dock (one metre longer that the Thompson Dock in Belfast built for the *Titanic*) and around the workshops, which are still utilised for luxury boat repairs.

Standard gauge track was laid on both sides of the dock for use by steam cranes, it is covered by bitumen on one side and fully exposed on the other. An interesting feature is that the sleepers were laid in recesses cut into the sand stone to keep the rails as low as possible.

David Jehan

Members of the tour group at the graving dock at Woolwich in Sydney on 23 November 2109. *Photo David Jehan*

Book Review

Rails to Rubicon
A History of the Rubicon Forest

by Peter Evans

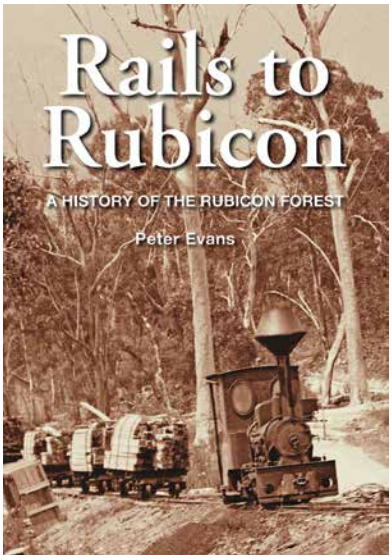
Published November 2019 by LRRSA. Hard cover, 200 pages, A4 size, 240 photographs and maps, bibliography, references, and index. Available from the LRRSA online bookshop: $49.50 plus postage ($37.00 plus postage for LRRSA members)

This impressive publication is the second edition of Peter Evans' seminal work, *Rails to Rubicon*. It is a richly-detailed, copiously-illustrated history of timber getting and hydroelectric generation in the Rubicon Forest during the first half of the twentieth century. The first edition was published in 1994 and has been long out of print. The 25-year gap between the two editions emphasises the improvements made in printing technology and photo-enhancement techniques, amongst others. The book's many photographs, diagrams and maps have also benefited by being colour printed on quality paper. The original grey-scale photographs now appear in an attractive sepia colour and are sharper, clearer, and show greater detail. The comparison between the monochrome maps and diagrams of the first edition and the colour renditions appearing in the second edition is even more pronounced.

The original text has had some minor updates but otherwise is basically unchanged. The first edition's comprehensive set of appendices, end notes, references, selected bibliography and an index have been reproduced in full in the second edition.

The setting for Peter's book is the Rubicon Forest situated high on the northern fall of the Great Dividing Range, some 100 km north-east of Melbourne. The higher levels of the ranges rise to over 1000 metres above sea level and regularly see heavy winter snow. The rugged terrain is drained by the fast-flowing Rubicon and Royston Rivers which over the millennia have cut deep valleys between the dominant ridges. The State Electricity Commission of Victoria (SECV) took early advantage of the region's high annual rainfall and favourable topography to construct that State's first hydroelectric scheme on the Rubicon River and its tributaries.

The Rubicon Forest is also home to the Mountain and Alpine Ash, the world's tallest hardwoods, and vast stands of them clothed the steep-sided granite ridges that dominate the local area. The pioneering saw millers employed timber tramways as the only practical means to access this timber and despatch it to market. A network of steeply-graded, wooden-railed horse-tramways, built to the unusual gauge of 3 ft 4½ in, extended up into the ranges to supply logs to isolated bush sawmills and to bring their sawn timber out. These tramways converged to a single transhipment point at the terminus of a 2 ft-gauge, steel-railed, steam tramway which connected to the Victorian Railways broad-gauge railhead some 20 km north at Alexandra.



As the name of the book suggests, the major theme centres on the diverse collection of tramways and haulage inclines that serviced the various sawmills and the SECV's hydroelectric scheme installations. These tramways and their histories are described in detail and well-reflect Peter's meticulous research and extensive field-walking efforts, tasks which took nearly a decade to complete. Their construction and operation, and their step-wise extension into more remote areas as timber stands were progressively cut out, is given a logical and comprehensive coverage in successive chapters of the book. The 2 ft-gauge steel-railed line to Alexandra featured three small Krauss steam locomotives, later replaced by two small diesel locomotives, the first ever to be built in Victoria. A solitary Day's rail tractor patrolled the upper reaches of the wooden-railed tramways in later years. Locomotive enthusiasts will be pleased with the extensive detail and histories provided for these units.

An interesting and entertaining theme extends through the early history of the 2 ft-gauge steel-railed Rubicon Tramway that linked the wooden-railed tramway system to the Victorian Railway's broad-gauge railhead at Alexandra. The local Council, to protect its rural roads, insisted that all timber from the Rubicon must be transported by tramway. Thus, all timber from the Rubicon Forest had to funnel through, firstly, through the lower section of the 3 ft 4½ in gauge wooden-railed tramway, then be transhipped to the 2 ft-gauge steel-railed tramway for despatch to Alexandra. The two tramways were owned by different companies, both of whom had their own sawmills up in the Rubicon Forest. The history of the line is spiced by the often-bitter rivalry between the principal directors of the two companies who were forced to use each other's tramways. Disputes over access, the rates each charged the other, the amount of sawn timber loaded on each tramway truck, and an enduring mistrust lasted for nearly 20 years.

The book, however, has a wider focus than just the tramway systems, fascinating though they are. The isolated sawmills and their small settlements are described in detail. Their locations are illustrated by excellent colour maps prepared from painstaking field investigations. Oral history collected from many aged interviewees has brought to life for the reader what is was like to live and work in the forest during those times. The bitter winters in deep snow form a stark contrast to the devastating impact of the January 1939 fires, when 12 men lost their lives in the Rubicon Forest and all but one of the sawmills were destroyed.

An interesting chapter is devoted to "White Coal," the SECV's Rubicon hydroelectric scheme. The construction and operation of the various dams, aqueducts, the aqueduct tramways and the pipelines are described. A good insight is given into the often-complex relationships between the SECV, the Forests Department, and the sawmill and tramway owners, all of whom had different agendas.

The only constructive criticism this reviewer ventures to offer concerns the presentation of the topographic locality maps. These are essential references for readers unfamiliar with the Rubicon Forest. The proliferation of sawmills and tramways over the 40 years of history covered by the book requires continual reference back to the maps to provide context. Unfortunately, the use of thick, close-set contour lines has tended to swamp the essential details of tramways, haulages, sawmills, aqueducts and text. This was no doubt unavoidable for the first edition when heavily-contoured Victorian topographic maps were the only option available to use as base maps. A less obtrusive map base for the second edition, together with the use of different colour sets for sawmills, tramway gauges and ownerships, and SECV installations, would have enhanced readers' comprehension and general presentation.

Nevertheless, this second edition of *Rails to Rubicon* is highly recommended for all those with an interest in either light railways, the timber industry, or the history of the Rubicon Forest. Those fortunate to have a copy of the first edition should seriously consider purchasing a copy of this well-presented second edition to update their library.

Ian McNeil

Heritage & Tourist NEWS

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

QUEENSLAND

DURUNDUR RAILWAY, Woodford

610mm gauge

On the rollingstock front, a highlight of the last couple of months was the return of the bulk of the loco driving wheels which were away for turning and reprofiling. One driving wheel pair from the Perry which is also being fitted with a new tyre, plus one driving wheel pair for *Bundy* which needs new roller bearings, are still to be returned.

All of the wheels for *Goondi* (Fowler 0-6-0DM B/No.18260 of 1929) were returned which has meant workers could lower the loco back onto its wheels, refit the side rods and brake gear etc. Work on this loco has now slowed waiting on the motor which is being overhauled off site. Brake force tests have been conducted and have exceeded the minimum requirements by over 400%. This loco is 90 years old this year and if you include mainline cane railway locos as a mainline loco, it is the oldest operating internal combustion mainline loco in Queensland and one of only a few in Australia. Work on this loco has been nominated for an RTSA award.

While waiting on the motor for *Goondi*, work has moved back to the ex- Innisfail Tramway/Goondi mill ballast wagon and Baguley (0-6-0DM B/No. 3377 of 1953). It has been decided to focus on getting four big diesels up and running (*Goondi*, *Gemco*, *Netherdale* and *Baguley*) before moving the main focus back to the steam locos. In this way, the rollingstock team will be able to focus on working on the steam locos as no urgent major work should then be required on the diesels.

During the year, workers have continued to replace defective sleepers identified on the independent track inspection plus a number of other sleepers that were nearing the end of their life.

DRB 40: 360 November/December 2019

BUDERIM PALMWOODS HERITAGE TRAMWAY, Buderim

762 mm gauge

The battle over the location of the Buderim Krauss locomotive continues. It would appear that Council officers are determined to press ahead and rush through the building of the new toilet block excluding the Krauss loco before the Council elections in March, thereby disregarding the public who overwhelmingly support the inclusion of the Krauss display with the toilets.

Phillip Morrow for the Buderim-Palmwoods Heritage Tramway Inc.

BALLEYHOOLEY RAILWAY, Port Douglas

610 mm gauge

In a significant move, The Tin Shed, (the Douglas Community & Sports Club), today announced it has put on hold ownership of the Bally Hooley Steam Railway. In October this year, the Bally Hooley Steam Railway was gifted to one of the Shire's largest and respected not-for-profit organisations, the Tin Shed.

In the original proposal, The Tin Shed would have taken ownership of the Bally Hooley assets, which includes the four locomotives – Nelson, Bundy, Speedy and Mowbray – six carriages, and the Bally Hooley Depot and workshop. It was also announced at the time that to assist with the running costs associated with the Bally Hooley Railway, the Club would also take over the popular Choo Choo's Café at the Marina.

But in a statement released after a special board meeting, The Tin Shed said the gifting has been put on hold for the time being due to several problems. In the meantime, the Club will continue to promote the Bally Hooley Rail Tours and Choo Choo's for the benefit of the community, Bally Hooley Steam Railway and itself. The decision comes a few weeks after another of The Tin Shed's assets, the Mossman Golf Club, was reported to be experiencing a number of challenges; loss of revenue and a shrinking membership. The club has to reassess the position and will then decide on the Railway.

Newsport Daily Online newspaper 3/12/2019; Howard Salkow, Senior Journalist

Newly restored locomotive NGG16 129 during trial runs at Belgrave on the Puffing Billy Railway during October 2019. *Photo: Mike McCarthy*

VICTORIA

ZIG ZAG RAILWAY, Clarence

1067 mm gauge

A posting on Facebook shows the final touches recently being put to the relaying of track where an embankment slipped just to the west of Clarence Tunnel. This removes the last impediment to work trains and track machines being able to travel, and work, all the way from Bottom Points to Clarence and will be a major step towards the resumption of passenger services.

Facebook post 18 11 19 by Terry Boardman in Abandoned Railways around the world

PETE'S HOBBY RAILWAY, Junee

610 mm gauge

As part of the construction of the locomotive and rolling stock storage shed, Pete's Hobby Railway (PHR) has taken delivery of a seven metre diameter turntable.

Built off-site using the expertise of two local business firms in Wagga Wagga and Junee, the turntable has been designed following extensive on-line studies of similar facilities built for use on narrow gauge preservation railways around the world, and was necessary owing to the limited access availability to PHR's new storage shed.

PHR is currently waiting for the availability of a local contractor to dig the foundations area for the turntable, following which the surrounds will be constructed, including the ring on which it would turn, the turntable dropped into place and the access tracks linked up with the main line.

At this stage, it is likely that a direct connection by the inner part of the main line to the turntable will be constructed, as this will allow earlier access for the PHR motive power and rolling stock to the interior of the shed.

Later, it is planned to install a right-hand standard gauge point which has previously been rebuilt for 2-ft gauge operations. This would allow the inner main line to be continued around the side and rear of the shed, to form a balloon loop and eventually connect with the outer main line, thus providing for continuous operations.

As part of the turntable installation and laying of associated trackage leading to the newly completed loco and rolling stock storage shed, PHR on Saturday 30 November took delivery of a pallet load of 55 recycled plastic sleepers.

Manufactured at Mildura, these sleepers, each of 1200 mm in length, 200 mm width and 100 mm in depth (approx. 4 ft x 8 in. x 4 in) were first trialed on the local Redcliffs Historical Steam Railway (another 2 ft gauge volunteer-operated tourist operation) about four years ago and have proved to be so successful that the Society is gradually re-sleepering the whole of its 1.5 km track over the next few years. The plastic sleepers have an anticipated service life in excess of 80 years in tourist railway use, compared with ten years or so with second-hand timber sleepers. Larger size plastic sleepers are currently being trialled by Queensland Rail, V/Line and Metro Trains Melbourne as well as at various tourist railways such as Puffing Billy and Walhalla Goldfields Railway. Special rail fasteners and augers have also been purchased for attaching the rail to the sleepers.

Previous reports have covered the then rapid progress being made during the second half of 2018 with the overhaul of PHR's 1900 vintage Fowler 0-6-0TT, along with the identification of problems following the replacement of its original frame with that from another locomotive back in the 1930s.

Stripping down and reconditioning of the various parts were completed during this time, along with complete detubing of the Fowler's replacement 1932 Belpaire-type boiler and its inspection by a qualified Boiler Inspector. Since then, progress had been delayed by the inability to obtain new boiler tubes. Originally promised for delivery last December, it was only in early November this year that 75 tubes of 3 m length and 1¾ inch diameter were finally advised as being available for collection. This delivery has yet to be arranged from Lithgow to Pete's Hobby Railway at Junee.

This extended delay for the boiler tubes inhibited further real progress on the restoration during the current year. Further restoration works will be carried out where practical, as time (volunteers) permit.

Earlier progress reports have covered the continuing problems being experienced with the original steam turret on the 1915-vintage Hunslet steam locomotive when welding repairs of a hair-line crack proved to be unsuccessful. A replacement was manufactured using larger machinery at Eagletech Engineering, Lithgow. Eagletech has also loaned a second safety valve to replace an inappropriate air valve fitted during the previous overhaul at Goulburn.

Already, the hot summer sun is taking its toll on the paintwork of the locomotives and rolling stock, in particular to the red headstocks of the Hunslet steam loco, which have now faded to a shade of pink!

Pete's Hobby Railway Progress Report 54 December 2019

VICTORIA

PUFFING BILLY RAILWAY, Belgrave

762 mm gauge

On Friday 1 November "Vale Jim Rae" was chalked to the front of locomotive 7A. Jim had the honour of being the fireman on the last official train to Erica in 1954. He has been involved with railways since then and did a special invitation firing of 7A when that locomotive visited Walhalla for the centenary of the railway in 2010.

On Wednesday 27 November, ex-South African Railways 2-6-2+2-6-2 Beyer Garratt NGG 16 No. 129 hauled 16 carriages between Lakeside and Gembrook on a load and brake trial. The locomotive has been rebuilt and gauge-converted from 610 mm to 762 mm in the PBR's Belgrave workshops. Timetabled departure time was 6.00 pm with a scheduled return at 10.35 pm. Use of this locomotive on passenger trains will commence soon.

What started as an innocent meal table discussion amongst fellow enthusiasts of the Puffing Billy Railway is now a dream realised, with the South African Class NG/G16 129 Garratt locomotive restored to its former glory and rolling from Belgrave station after 23 years of fundraising and restoration works. Built by Beyer Peacock & Co of Manchester, England, in 1951 for the South African Railways, the NG/G16 was a class of steam locomotive used to deliver agricultural and mineral products across the hilly terrain and tight curves of South Africa's rural railways.

Its purchase in 1996 for the Puffing Billy fleet was spearheaded by two men – Peter Ralph and Alan Gardner – with a dogged determination to obtain a highly regarded Garratt locomotive; one that would support the sole surviving Victorian Railways Garratt, G42, which was being restored at the time.

As luck and a pinch of persuasion would have it, the Alfred County Railway in South Africa had a surplus of Garratt locomotives and in 1995 were persuaded to generously sell one to the Puffing Billy Railway.

Finally, as momentum built in 2011, a dedicated team of volunteers and workshop crew, including John Brady, Harry Hibgame and Russell Hicks, commenced full re-gauging and refurbishment works.

With its first fire lit on 26 September 2019, and the engine first moving under its own steam on 6 November, the locomotive along with G42, pulled a team of supporters from Belgrave to Menzies Creek on Wednesday 18 December (the same date as Puffing Billy's 119th birthday). The two Garratts attracted a big crowd of photographers at Belgrave station, at the bridge and along the way to Menzies Creek station. At Menzies Creek, guests were quickly ushered into the museum where a two course sit down meal had been organised by the ETRB. While guests were having their meal in 40 degree heat, various speeches were made by the ETRB CEO, the President of the PBPS, members of the restoration team and Peter Ralph, who provided the impetus for the project. After lunch, guests

Locomotive 7A at Belgrave Station on the Puffing Billy Railway featuring the "Vale Jim Rae" wording on the smokebox door. Photo: Andrew Webster

could wander the museum inspecting the exhibits and photograph the NGG 16 Garratt, which had been driven into the museum and stationed next to the other NGG Garratt, No. 127, which is in pretty much the same condition as its sister was when it arrived. Also stationed outside the museum was the Climax locomotive and some other exhibits. It was an historic day and as many people remarked, one that could not be staged anywhere else in the world. You can see South African double headed Garratts in Porthmadoc in Wales, but what you cannot see anywhere other than at Puffing Billy, are G42 and a South African 610 mm gauge Garratt regauged to 762 mm in tandem. A unique event. On sale at the event was a commemorative book published by the PBPS called *SAGA to Steam* which covered the early life of NGG 16 No. 129 in South Africa, its sale and transport to Belgrave and its restoration to working order as well as many photographs of all aspects of its career.

Andrew Webster site visit 1 November 2019 and Puffing Billy Media release 18/12/2019 Additional notes by Andrew Webster

ALEXANDRA TIMBER TRAMWAY AND MUSEUM, Alexandra

610 mm gauge

Sunday 8 December was a gala day at the Alexandra Tramway as it was the launch of the second edition of Peter Evans' book, *Rails to Rubicon* (the book was actually flagged and whistled away by the deputy Mayor of the shire as launching was too nautical). The book has been altered from the original by some 500 words but what is new is that all the photographs have been rescanned, producing much higher quality and the drawings and diagrams have all been redone in colour to a much higher standard. Copies were being sold on the platform signed by the author and train rides were provided. Initially the train was hauled by the resident steam locomotive John Fowler, 0-6-0T, 11885 of 1909, but this was then shunted aside and replaced by the Kelly and Lewis diesel locomotives that worked the line to Rubicon when it was in operation. These were *The Pioneer*, 0-6-0 DM, 4271 of 1935 and *Paul Simpson*, 0-6-0 DM, 5957 of 1936. The event was very well attended and many books were sold.

Report by Andrew Webster 8/12/2019

KERRISDALE MOUNTAIN RAILWAY, Kerrisdale

610 mm gauge

A site visit on Sunday 3 November revealed that Douglas, the steam locomotive which is being built here, is being stripped down for painting in Midland Red (Primrose Red according to Jennifer Forbes). Photographs show part of the locomotive removed and undercoated in grey ready for the overcoat of red which can be seen on a sample panel on the side of the locomotive.

Andrew Webster site visit 3/11/2019

MARIBYRNONG CORDITE WAGON, Maribyrnong

18.5 inches (460 mm) gauge

Frank Belcher reports that Robert Sherwood had a Maribyrnong cordite wagon at his workshop that he had hoped to restore and then offer it to the Light Railway museum at Milang, SA, but sadly Robert passed away suddenly and was unable to complete the project.

The cordite wagon is now in Frank's shed and he was going to restore it, but is presently in the process of restoring a 1930 S series section

ALEXANDRA TIMBER TRAMWAY AND MUSEUM

The official launch of Peter Evans' book Rails to Rubicon *was held at Alexandra on Sunday 8 December.*

Right: *The deputy Mayor of the Shire of Murrindindi waves the official train through to officially launch the book.*

Below: *Kelly and Lewis locomotives* The Pioneer *and* Paul Simpson *provided some of the motive power on the day to take passengers around the museum tracks.*

Both photos: Frank Stamford

Above: *Steam locomotive* Douglas*, which is being built at the Kerrisdale Mountain Railway, has been stripped down and awaits its new coat of paint on 3 November 2019. Photo: Andrew Webster*
Right: *Fowler locomotive* Wee Georgie Wood *0-4-0 WT 16203 of 1924 waits to take more passengers at Tullah on 1 December 2019. Photo: Peter Evans*

car from the Silverton Tramway Company and a Wittber Motor Inspection Car that was also owned by the Silverton Tramway Company, and feels that it could be a few years before he could get around to the cordite wagon.
The cordite wagon is complete except for one end canvas used for connecting the wagons together so the cordite could be dried. Frank would like to donate it to the Milang Museum.
Frank Belcher

TASMANIA

TASMANIAN TRANSPORT MUSEUM, Glenorchy

1067 mm and 610 mm gauges
Recently the museum said farewell to Abt 0-4-2T No.2, which was purchased by the museum after the closure of the Mount Lyell Mining and Railway Company line in 1963. The locomotive has now been purchased by the West Coast Wilderness Railway and will be restored to full working order in Somerset, before making its way to Queenstown for use on that railway.
Tasmanian Transport Museum Facebook Like Page 8/11/2019

WEE GEORGIE WOOD STEAM Railway, Tullah

610 mm gauge
For the remainder of the summer season this railway will be operating on the weekends of 1 and 2 February; 22 and 23 February; 7 and 8 March; 28 and 29 March; and 4 and 5 April. The railway will operate between 10 am and 3 pm, each trip has a duration of about 20 minutes.
Wee Georgie Wood website:
www.weegeorgiewood.com.au/

SOUTH AUSTRALIA

MOONTA MINING MUSEUM

Alf Atkin visited the Moonta Mining Museum on 8 October. The museum has a steam outline petrol driven locomotive that originally operated at the Adelaide Zoo.
The trip through the mine site takes about 45 minutes stopping at two places. At the first stop the driver gives a very informative talk about the history of copper mining around Moonta. At the second stop at the Washing and Drying Interpretive Centre the passengers disembark and the driver gives another very informative talk about the process of recovering additional copper. There are also some information panels here explaining the process as well as pictures of the mining site when it was in operation. A visit to this site is highly recommended for anyone interested in the copper mining industry in South Australia.
Alf Atkin email dated 4 November 2019

MOONTA MINING MUSEUM

All photos taken on 8 October 2019 by Alf Atkin.
Above: *The steam outline petrol driven locomotive that takes passengers around the site.* ***Right:*** *The mining locomotive about to enter the tunnel.* ***Below:*** *Mining skips scattered throughout the site demonstrating how they were used to cart materials around.*

WESTERN AUSTRALIA

BENNETT BROOK RAILWAY, Whiteman Park
Gauge 610 mm
The Management Committee has agreed to pay the owners, the Brajkovich family, $25,000 for the complete Ashley consist. This amount was paid on Friday 1 November, giving WALRPA (West Australia Light Railways Preservation Society) full ownership of this consist. This is a significant milestone in the railway's development.
In September there was another successful Ashley Day and the departmental managers turned out the locomotives and rolling-stock in tip top condition. There was a glitch with Ashley's new brake shoes, but the show went on without any interruption to services. However, the railway has received complaints from passengers and members alike about the excessive use of loud horns on the diesel locos. Many young children become upset by excessively loud noise, and these are the current and future customers. All drivers have been asked to moderate their use of the horns on the locos, particularly where those horns may be facing back along the train.
A track day was held on Sunday 22 September at the western approach to One Duck Lagoon bridge. The loop south section of the bushland loop was closed for the day to facilitate the work. Thirteen life expired timber sleepers were replaced by new recycled plastic sleepers and almost 50 sleepers were packed by hand using Cobra petrol packers.
On Betty Thompson (Perry 0-4-2T) No.1 the fire grate support bars have been upgraded, cab barrel unions replaced, and minor packing and adjustments made. On Fowler (Fowler 0-6-0DM ex Isis Sugar Mill, Qld) No.2 a suspension overhaul is in progress and the cab interior stripped in preparation for painting. The cab and frame have been pressure cleaned and the new Cummins engine and Allison gearbox are being removed from the garbage truck presently in the hanger to be fitted to the Fowler. Workers are also investigating replacement of the wheel tyres. On Mallet No.3 (O&K 0-4-4-0T ex Magnet Tramway, Tasmania) workers are investigating crowd funding and lottery grants and estimates for an all welded boiler are being investigated.
Ashley No.5 has had a new brake pressure gauge imitating a steam pressure gauge and an air train brake pressure regulator fitted. A standard fuse box has been fitted and a general electrical upgrade is in progress. Atlantic Planet No.7 has been painted and a torque converter spline drive replaced due to failure. The Dorman Planet No.8 is running, but needs an engine overhaul due to age and leaking seals on the cylinder liners. New brake shoes have been cast and fitted. 0-6-2T Perry No.9 has had its suspension upgraded, a reverser lever refitted along with the reach rod to the reversing shaft. The mechanical lubricator has been cleaned and re-fitted. The Ruston has had a solar panel and controller fitted as well as LED headlights fitted along with a battery. An electric horn has been fitted and train brake system improvements made. The Gemco PW27 is waiting on the last pinion to be fitted by the outside fitter as it requires precision alignment to give any kind of reasonable lifespan.
On NG15 2-8-2 No.123 boiler tubeplate cleaning is in progress as is chassis cleaning, particularly the cylinders. The boiler will be ready for transport to Willis Engineering for repairs and re-tubing when the tube-plates are cleaned. The ash pan will be fabricated when measuring and 3D drawing is complete. The first prototype will be made of mild steel; other materials are possible once dimensions and design are finalised.
The Ballast Regulator has been rewired and fitted with new lights and a new dashboard including a tachometer. A new spark arrestor has been fabricated and a start made on replacing hydraulic hoses in order of need and where missing.
The LA ballast wagon has been in need of its hopper doors being repaired for some time. While it's in the shop it's also getting a coat of paint to spruce it up a little, complete with stencilled wagon numbers and old school Westrail logos.
The Bennett Brooklet, November/December 2019

Beyer Garratt locomotive K1 at Statfold Barn Railway in mid-November 2019. Photo via Terry Boardman

OVERSEAS

STATFOLD BARN RAILWAY, Statfold, UK
610 mm gauge
The Ffestiniog & Welsh Highland Railways has announced that the pioneer Beyer-Garratt, K1, will be moving to its new home of the Statfold Barn Railway. The K1 has been regarded as an icon of the Welsh Highland Railway and has been missed by enthusiasts and members since being withdrawn in 2014 when its boiler ticket ran out. Since withdrawal it has lived at Dinas in a part-dismantled state, awaiting full retubing and an intermediate overhaul of its power bogies. The F&WHR has had good relations with the Statfold Barn Railway and is working together to ensure a solution has been found that means enthusiasts have access to the locomotive ahead of a return to service.
K1 will move to Statfold Barn at the end of November 2019 and will go on display shortly thereafter. Cosmetic restoration will take place and will see the cab fittings replaced after they were removed at the end of its last time in service. The eventual return to steam should be a straightforward matter as the boiler which K1 carries was built by Israel Newton when the original boiler was found to be beyond repair.
K1 was built in 1909 at the Gorton Works of Beyer Peacock and was purchased by them in 1947 from Tasmania's North East Dundas Tramway, where it spent its working life. This locomotive is unsuitable for use on the Ffestiniog Railway, due to its size but will return to the Welsh Highland Railway when a suitable slot for overhaul opens up.
Article in *Rail Advent* by Michael Holden Facebook post 27/11/2019

SIMON HUDSON, England
610mm gauge
Simon Hudson, proprietor of The Steam Workshop in Yorkshire, has purchased John Fowler 0-4-2T 16341 of 1924, which had been imported to the UK recently by a third party. The locomotive was originally built for Tully Mill and came from the deceased estate of Warwick Turner at Echuca, Victoria. In December 2019 the locomotive was placed under cover for the first time since 1961 when it arrived at the restoration workshop in the north of England where Hunslet 303 was refurbished, and it is anticipated that it will be returned to full working order. It was last in steam 58 years ago, was rescued for preservation by Bruce Macdonald after being in a park for 11 years, and was at Lachlan Vintage Village for 13 years from 1973. It was then stored in the open at Warwick Turner's Echuca property for 33 years. The locomotive is missing side tanks, sandboxes, most of the chimney and some of the valve gear on one side.
Simon Hudson 12/2019

On 15 October 1966 the ARHS (WA division) ran a trip into the South-West of WA. On the Donnelly River sawmill line, in near-perfect weather we see Bunnings' No. 176 in its last year of active service. Passenger accommodation is basic - but who is complaining! Built by James Martin & Co, Phœnix Foundry, Gawler, b/n 178/1898, the loco started life with the South Australian Railways as Y176, one of a long line to the same basic 'G-class' 2-6-0 layout. These locomotives found use on many 3ft 6in-gauge railways in Australia with dozens being sold into industry. Y176 was sold to Bunnings in 1936, reboilered and saw another thirty years service. It was badly burnt in the Yarloop bushfire in 2016 and currently lies rusting in the open. Photos courtesy: www.westonlangford.com/images/photo/107917 and 107927