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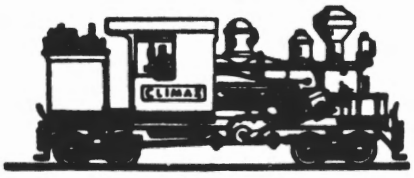

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Light Railways is the journal of the Light Railway Research Society of Australia. The Society's members are undertaking research into the history of light railways in Australia and her territories. These include railways and tramways serving the timber industry, sugar mills and mines, construction tramways, industrial railways and narrow gauge passenger-carrying railways.

Articles, letters, book reviews, maps, photographs and drawings on topics of relevance to *Light Railways* are required for future issues. Comments on previous articles offering corrections or additional information are welcome for inclusion in our "Letters" columns. Written material should be typed with double spacing. Material should be sent direct to the editor.

Cover: British Australia Timber Company's Shay locomotive (B/No. 2135) at Coffs Harbour in the period 1909-14.
Photo: Coffs Harbour Historical Society (courtesy John Kramer)

W. RICHARDS AND SONS' TRAMWAY, WARBURTON, VICTORIA

by Chas Bevan

Introduction

This article describes Richards & Sons tramway which commenced at *The Points* on Herman's or the Big Pat's Creek tramway, about 4½ miles from the Victorian Railway's Warburton terminus at La La. The tramway ran about 15 miles from *The Points* to the head of Starvation Creek. It first climbed the spur between the Mississipi and Smythe's Creeks by steep irregular grades, then, after falling to cross the Mississipi Creek, it again climbed to cross the saddle at the present-day junction of Braham and Platt Creek Roads, the latter being constructed along the formation of the tramway.[6]

Only the first 9 miles of the tramway was solely owned by Richards & Sons. The remainder was owned by them in conjunction with other millers in the Starvation Creek area and was known as the Starvation Creek Tramway. The tramway was of 3ft gauge and, although it contained some steep and difficult sections, it was of a permanent and solid construction relative to the more usual tramway standards of the day. The line reached an altitude of 2759 feet.[2]

Early History

In March 1916 Richards & Sons were granted milling rights to 1000 acres of forest at the head of Starvation Creek. The site required the construction of several miles of tramway for access and for the removal of produce. In order to provide timber for the line, as well as some income during its con-

This photograph of a horse tramway on Richards' tramway is typical of the logging operation on the line. Timber rails were used on the tramlines beyond the mill.

Photo: APW Productions Collection

An empty log bogie returns to the forest.
Photo: NE Wadeson Collection

struction, Richards applied for, and were granted, a temporary mill site and logging area along the intended route of the tramway.[3] This temporary mill was established about 12½ miles from La La, or 8 miles from *The Points* by tram.

The tramway from *The Points* to the mill, and eventually one mile beyond it, was constructed by Richards & Sons for horse haulage. The grades and alignment were severe, particularly over the first mile of the line where the choice of a more favourable alignment was restricted by timber leases held by other millers. In this first mile curves as tight as 30 feet radius existed while grades of 1 in 9 could be found in short sections. One curve of 43 feet radius was on a grade of 1 in 12 and there was even one dead-end or zig-zag[4]. By comparison the grade for the remainder of the line to the saddle at Gifford's Camp was 1 in 28.

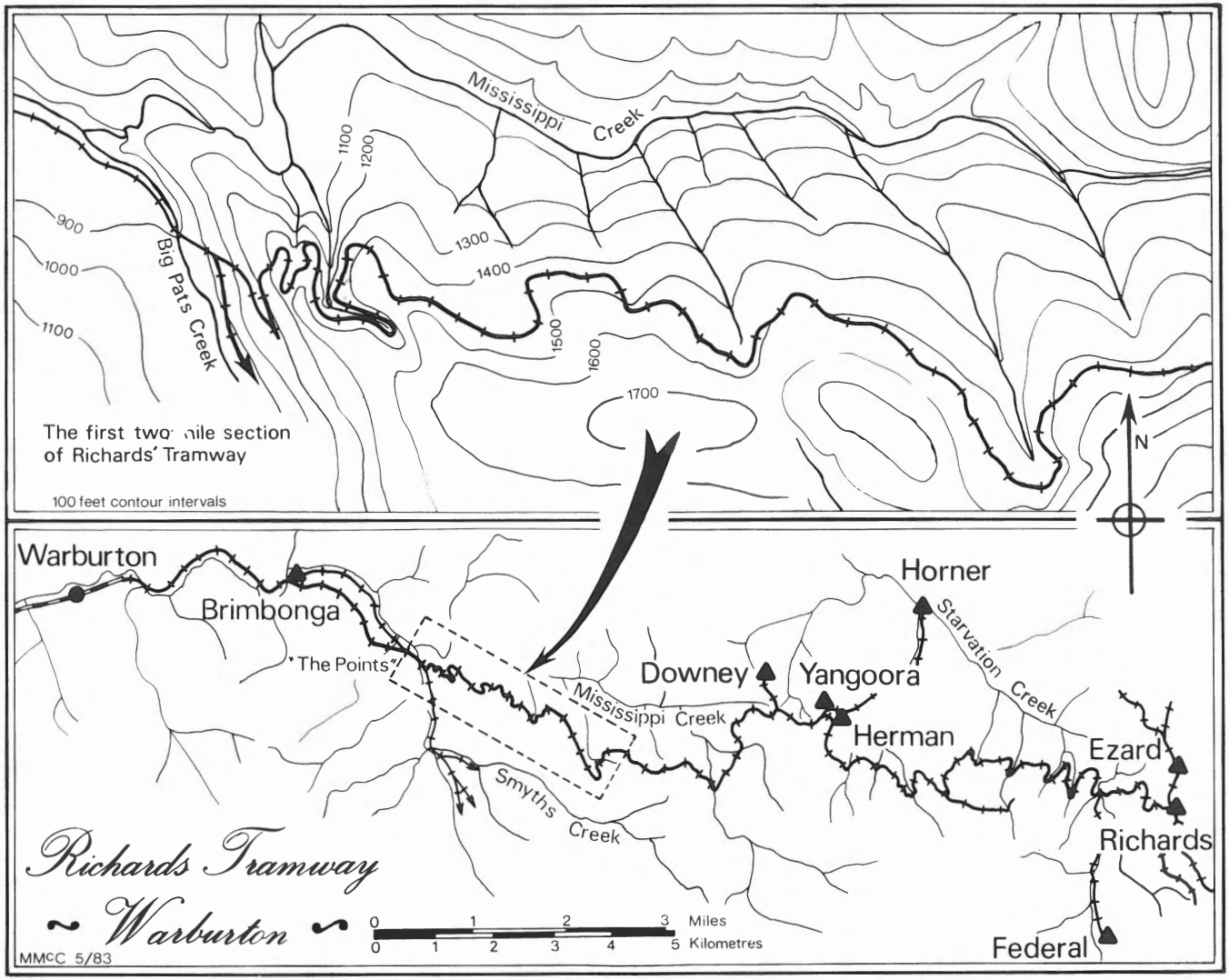
Starvation Creek Extension

Construction of the tramway by Richards & Sons past their logging landing, one half mile beyond their temporary mill, was slow and this led to moves by the Federal Timber Company (FTC) and Mr JF Ezard to take over construction beyond this point in 1920. These moves finally resulted in an agreement whereby the FTC and Ezard were to jointly complete the line from one mile east of Richards' temporary mill site to a terminus on the east side of Starvation Creek, some 4½ miles distant. From this terminus private tramways were to be constructed to individual mills sites. Under the agreement, Richards & Sons were to be part owners with FTC and Ezard of the new section of the tramline.

By late 1921 some 3 miles of the extension had been constructed and the line appears to have been completed by March 1922. Bridging, of which 1500 feet was necessary, was let out on contract. A statement of expenditure submitted on behalf of all three millers by FTC on 1 December 1921 indicated that Richards & Sons had supplied all tramrails, nails, bridge-decking, hand rails and original formation[5].

A feature of the Starvation Creek Tramway was its high cost. Detailed costs, contained in a FCV report[6], indicate that total costs amounted to £1803 per mile, of which wages account for £1044. Other costs included "horse feed, "chaff" and "bullock and horse hire" which would nowadays be replaced by petroleum and diesel costs, items which sounds far more prosaic to the modern ear. By comparison, contemporary FCV tramways had been constructed for £240-360 per mile.

Winch operations along Richards' tramway. Note the Nattrass rail tractor on the left.
Photo: EG Stuckey Collection



Operation and Maintenance

On completion of the Starvation Creek Tramway the ownership of the route from La La to the junctions of the private lines was:

From La La to *The Points*	4.5 miles	J. Herman (Big Pat's Creek line)
From *The Points* to mile 13.5	9 miles	W Richards & Sons
From mile 13.5 to the junction	4.75 miles	W Richards & Sons JF Ezard Federal Timber Coy.
From the junction to end of line	1 mile	W Richards & Sons JF Ezard

The first mile of the Richards tramway always presented difficulties in operation and as late as 1928 still required horse-haulage, even when locomotive or tractors hauled loads on the remainder of the line[7]. Eventually this section was realigned to enable locomotive operation over the full length of the line.

By late 1923 the lower section of the tramway owned by Richards was in poor condition, despite the employment of four repairers. At this time approximately 6 miles of the line was laid with steel rails and the remaining 3 miles with wooden rails[8]. It was reported that Richards were buying steel rails for tramways use so, presumably, it was planned to replace the remaining wooden rails with steel.

The 1922/23 year saw heavy use of the tramway with the following estimates of timber being shipped over the line:

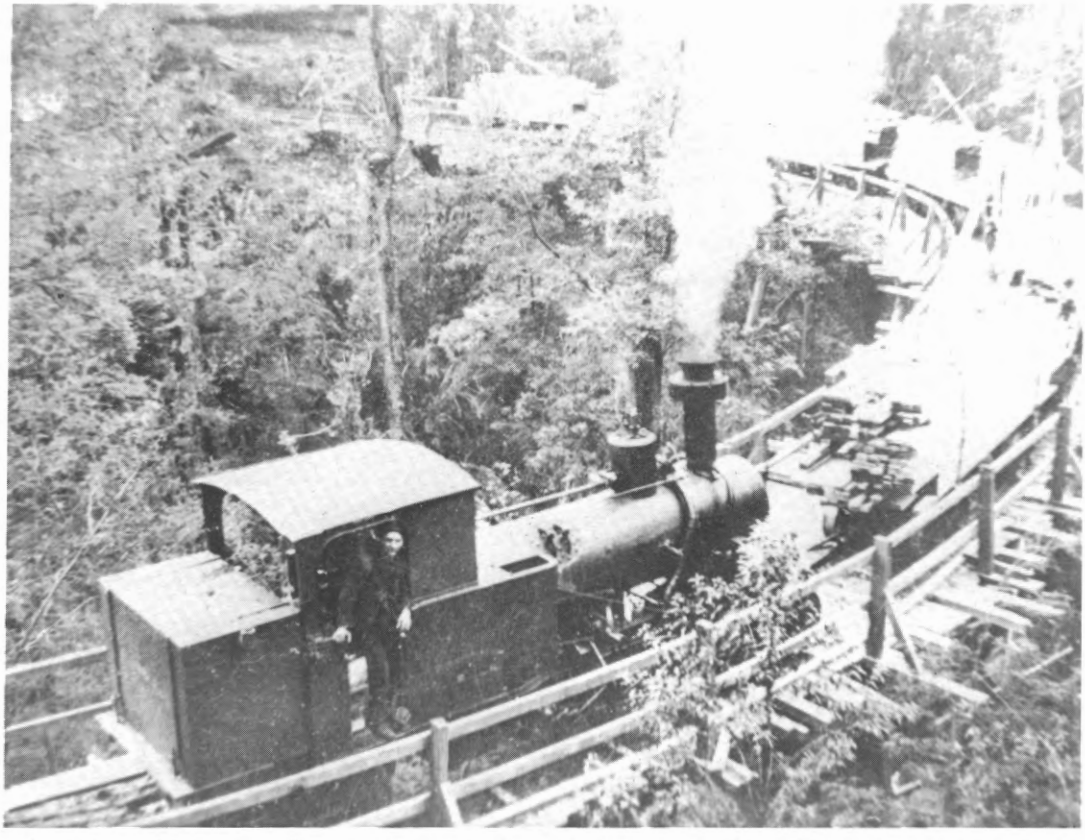
Richards & Sons	1.5 million super feet
JF Ezard	2 million super feet
Timber Products Co (formerly FTC)	270,000 super feet
Yangoora Sawmills	70,000 super feet

Charges over the line were 5 pence per ton-mile in 1923/4. Later the rate dropped to 4 pence.

With the opening of the Starvation Creek Tramway Richards & Sons were being urged to shift their operation to their allocated block in this district. However, the expense of buying steel rails for the tramway and the shortage of competent labour to erect the new mill caused delays and it was not until June 1925 that the mill was ready for operation.

Bushfires struck the area in 1926 and areas of burnt timber were allocated to both Richards and

Richards' tramway commenced at a location known as *The Points*. Here several timber tramways converged to connect with Herman's tramway into La La and the Victorian Railways.
Photo: NE Wadeson



The substantial nature of Richards' line is evidenced by the handrails on this trestle. Ezard's geared locomotive is hauling a load of timber to *The Points*. Photo: NE Wadeson Collection

Ezard who extended their tramways in order to log the burnt-out areas. Richards & Sons' extension left their new mill on a rising gradient of 1 in 60 and continued for some 2 miles before levelling off for the remaining 3 to 4 miles. By September, 1928 they were actively milling some 950 acres and their average weekly output had reached 20,000 super feet, although this was below mill capacity.

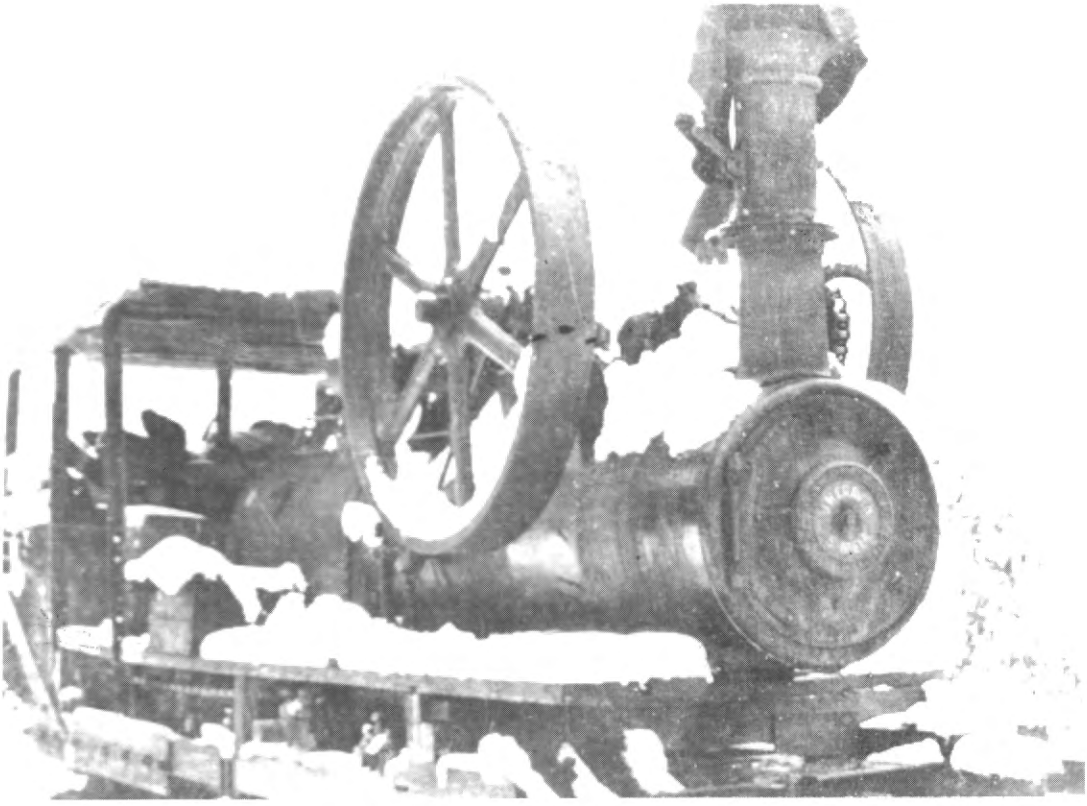
Motive Power

A report by FCV Forest Engineer, JL Lackland[9] in August 1928 provides considerable detail on the motive power used on the line at the time. The difficult first mile of the line still required horses, but the remainder was operated by a variety of motive power.

Timber Products Coy Ltd (formerly FTC) used horse-haulage on their four-feet gauge line from their mill to a junction with the Starvation Creek Tramway. Here the timber had to be transhipped and was then hauled along the "main" line by Ezard's motive power.

Richards & Sons had introduced a Day's tractor of 5-6 tons in 1927. While this was coping with the traffic, petrol consumption was high, as was the cost of repairs to broken springs etc brought about by the rough track conditions. Consequently Richards' were experimenting with a single-cylinder geared locomotive based on a portable steam engine mounted on a heavy wooden frame. Two chain driven four-wheel bogies supported the unit which weighed about 6 tons. The unit was slow and frequently gave trouble, a characteristic which was expressed in its local name of *Lumbering Liz.*

Ezard's motive power included a Nattrass rail tractor which was purchased in 1926 (Ed. *LR.80* page 21), but the unit broke down repeatedly and was laid aside by June 1927. The Nattrass tractor was replaced by a geared steam locomotive which weighed between 11 and 18½ tons according to various reports. The locomotive was constructed



Richards' own locomotive was a rather ungainly traction engine conversion. The plate on the smokebox reads "J.H. Craven S.Melb.". Photo: NE Wadeson Collection

from parts of two 2ft gauge steam locomotives purchased from Cameron & Sutherland & Co. of Melbourne in January 1928. The locomotives, which had previously belonged to the Goodwood Timber & Trading Co., Port Albert, were:

- an Orenstein & Koppel 0-4-0WT locomotive with 8½ x 12 in cylinders; and
- a Krauss side-tank locomotive with 8¼ x 12 in outside cylinders. (Ed. thought to be B/N 6416/1910)

Portions of these locomotives were combined into one geared locomotive similar to a *Climax* by utilizing framing built by the Day Engineering Co and a boiler by George & George of South Melbourne. Two 10 x 12 in cylinders with outside steam chests were mounted horizontally outside and below the frame[10]. The pistons drove a transverse jackshaft, which, in turn, drove, by bevel-gearing, cardian shafts to the inner axle of each of the four-wheel bogies. The wheel of each bogie was coupled by side rods. Boiler pressure was 120 psi and the slide valves were driven by Stephenson's gear worked from the jackshaft. Side tanks, cab, bunker and a spark-arresting diamond smoke stack were fitted.

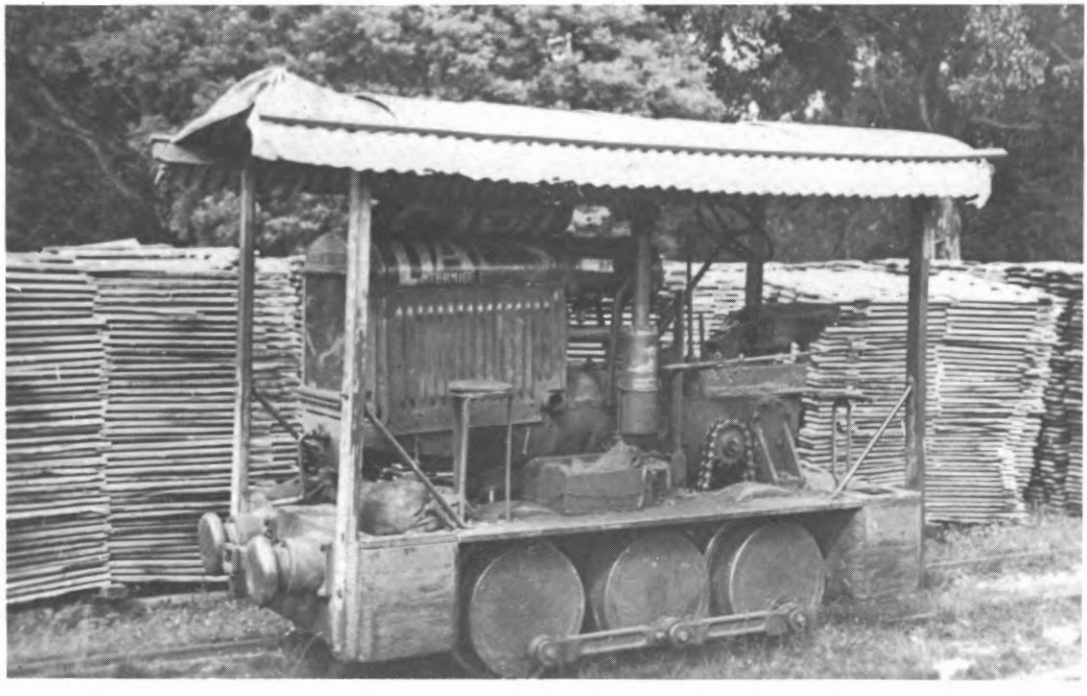
A report of September, 1928 indicated that Ezard's locomotive was in service on the line. Firewood used by the locomotive was charged at the same rate as the Victorian Hardwood Co. locomotive at Powelltown, viz, 10 shillings a month[11].

Upgrading

The condition of Richards' section of the tramway, particularly the first mile, was the source of many complaints by 1928. The steel rails varied in weight between 30 and 80 pounds and were not all of the same profile, while many rough joints added to the wear and tear on locomotives. Tractor springs were frequently broken due to this fault[12]. The formation itself was also in poor condition.

The safeworking arrangements were also criticised in an FCV report[13]. Although sidings, termed "lay-

Above: Ezard's four-cylinder geared locomotive. Photo: LG Poole, Courtesy JL Buckland
Below: Days 0-6-0 tractor, thought to be at Brimonga Seasoning Works.
Photo: EG Stuckey Collection



A sawmill close to the eastern end of Richards' line with a log awaiting the saw bench.
Photo: W&G Collection

byes", were provided for the crossing of trains, there was no telephonic communication or any other form of approved safeworking, other than a timetable, despite the four independent mills using the line. The use of horses on sections over which steam locomotives also worked contributed to a fire risk, as the timber packing between the rails for the horses became frayed and posed the danger of ignition by sparks.

In order to improve the alignment and grade over the first mile of the line, Richards & Sons negotiated with the owners of the two blocks on either side of the alignment. Agreement was eventually reached with a Mr Wiseman for the regrading of the tramway through his block for a payment of £1 per week[14]. However, Richards were concerned about the intended use of Ezard's steam locomotive over the line and they wished to be relieved of all legal responsibility before they would allow Mr Ezard to use his locomotive. They obtained an indemnifying insurance policy to this effect in October, 1928. A report of 24 September, 1928 states that Ezard's steam locomotive was operating on the Starvation Creek tramway[15], though whether it ran all the way to *The Points* at this time is unknown.

Decline

By 1929 the millers in the area were facing hard times and discussions were held on the lowering of cartage rates. It was stated that Timber Products Co Ltd had been closed for two years in the past six, due to fires in the bush and at the mill. The cartage rate was reduced from 4d to 3d per tone mile[16].

In January, 1929 a 1200 acre felling area used by Richards for their temporary mill was transferred to Herman & Sons and by April that year the mill was sold to Herman's too, leaving Richards with only the one mill. The mill is shown on maps of the area under Herman's name.

In August 1932, five mills were still using the tramway as an outlet to Warburton[17], but by 1936 there was little traffic. Richards & Sons ceased operations in the area about 1936 and, in 1938, they requested permission from the FCV to remove both their mill and the tramway. There was some reluctance to permit this as it was believed that there was still millable timber in the area. The dilemma was solved in 1939 when bushfires destroyed both the timber and the mill. Permission was then given for the removal of the remains of the line and mill.

Acknowledgements

The writer extends thanks to Arthur Winzenreid. Ted Stuckey and Norm Wadeson for their assistance and provision of material for this article.

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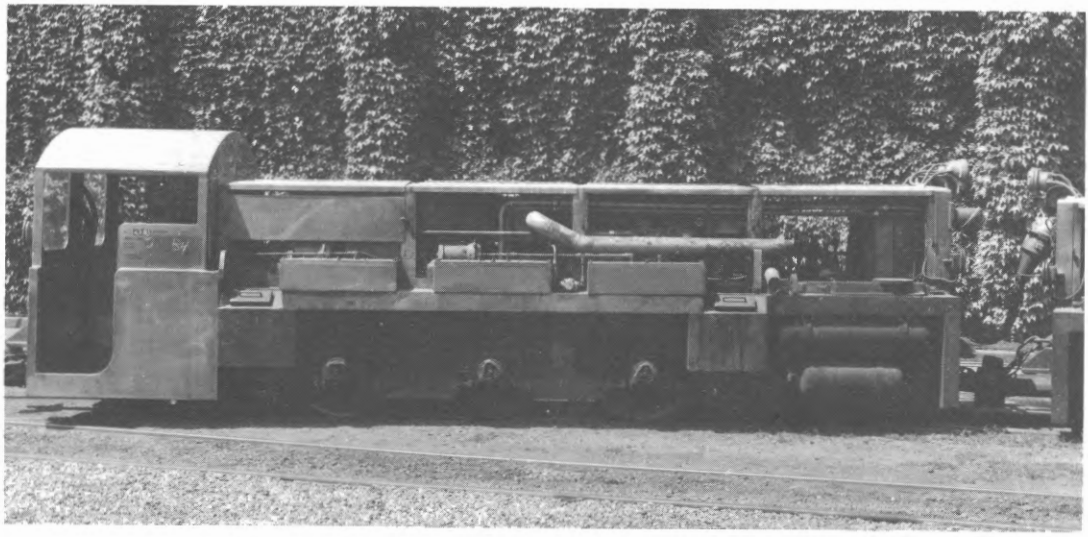
MODERN COLLIERY LOCOMOTIVE POWER

Notes by John Browning from information supplied by Anthony Weston

The underground coal mines of New South Wales feature a wide range of locomotives, powered man-transporters and rollingstock operating on 3ft 6in gauge.

Kandos No 3 Colliery near Kandos produces coal for supply to a neighbouring cement works under common ownership. It is unusual in that coal is hauled by train, not conveyor belt. The following photographs provide an indication of current operating practices.

Two EM Baldwin locomotives, Nos 9 and 10, haul a train of 6 bogie mine cars on 4 March 1983. Each loco weighs 25 tons. They carry builder's number's 9344-1-4-81 and 9344-2-4-81, having been delivered in 1981. AJ Weston



Above: Locomotive No 9. The unusual six-wheel configuration can be clearly seen. The axles are connected by chains and hydraulic transmission is used. This is a single-ended design and the connection to the second locomotive for multiple-unit operation can be clearly seen.
Below: Kandos No 3 Colliery locomotive No 11. This is a double-ended *Gemco* four-wheel battery electric built by George Moss. This unit weighs 23 tonnes and carries builder's number 2811-12-208-82. It was delivered in 1982. AJ Weston

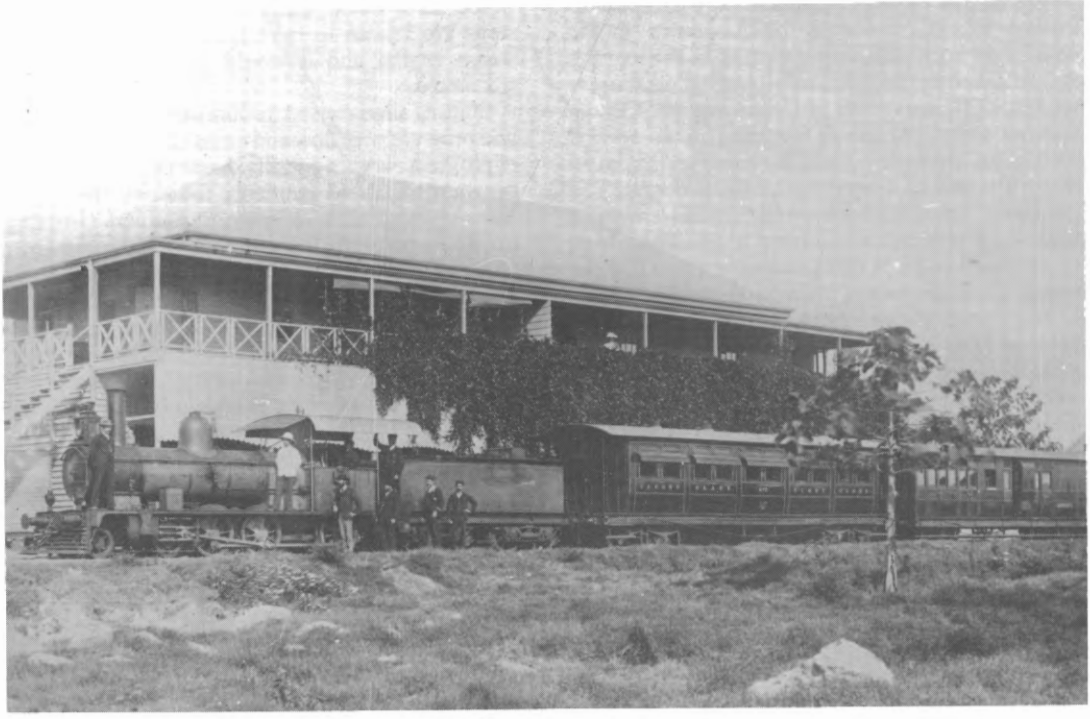
THE COOKTOWN QUARATINE TRAMWAY

by Ruth and John Kerr

In the far north of Queensland, miners and prospectors raced ahead of pastoralists taking over their roles as the pioneers of the last frontier. Unlike the squatters with their slow moving herds, more anxious to secure title to territory than to occupy it, the miners moved in with a rapidity that left Governments gasping in their efforts to provide necessary infrastructure. In contrast to the self-reliant pastoralists, who expected little more than a native police force to subdue the aborigines, the fortune seekers needed roads, mining wardens, police protection and the usual range of Government services.

Governments did react quickly to provide basic necessities but public investment in big projects exhibited the worst features of control by politicians and bureaucrats. Construction of the Cooktown Railway did not begin until 1888 when the Palmer goldfield was in serious decline, never reached its destination, and failed to provide the cheap transport that might have extended the life of the Palmer as a successful reefing field. The story of the provision of a quarantine station at Cooktown is equally lamentable. It too involved the provision of railed transport, a replica of the Cooktown Railway debacle on a miniature scale.

At its peak, a year and a half after the first rush began in September 1873, there were single days when over 1000 immigrants landed in Cooktown.[1] The overseas arrivals, mostly Chinese, came in crowded ships direct to the Endeavour River. There was very little understanding of the control of infectious disease 110 years ago, and the local residents' protection from the dreaded diseases of east Asia lay principally in the long incubation period aboard the slow sailing ships. Infections had



Cooktown Railway cir. 1890. The condition of the carriages suggests that the photograph was taken in the early years of the line's operation. John Oxley Library Collection

adequate time to make their ravages clear in the confined quarters of the vessel and its helpless passengers.

The lack of facilities was made abundantly clear when the *Mecca* arrived off Cooktown on 20 December 1877 with one case of smallpox. It was not allowed to proceed into port and the passengers spent a miserable Christmas in cramped conditions in the humid, oppressive heat of the tropical summer. The pathetic plight of the 67 persons aboard the *Mecca* fell on deaf ears. On 30 December the ship was moved north out of sight while the passengers nearly went out of their minds comparing their lot to the shorter anguish of those incarcerated in the black hole of Calcutta. Police Magistrate Howard St. George went to Lizard Island in January, hoping to select a quarantine station site. Meanwhile one person aboard the ship died of syphillitic smallpox and finally with no spread of infection, the ship and its luckless passengers were allowed ashore and to continue their journey.[2]

The *Thales* from Hong Kong suffered a similar fate three months later, fortunately in cooler weather it too being quarantined because of a smallpox outbreak. The captain refused to proceed south to Fitzroy Island off Cairns for quarantine as the vessel had been seriously damaged in the journey and he asked for permission to land the passengers six miles (10 km) north of Cooktown. St. George secured tents and swore six men in as special constables to ensure none of the passengers strayed away. An area of several square miles bounded by the coast, the north bank of the Endeavour and a long range of hills was declared a quarantine area on 17 April 1877. It was revoked at the end of the month when the passengers were allowed to leave.[3]

These two incidents underlined the need for humane tratment of those unfortunate enough to find themselves on ship with an outbreak of disease. The Government recognised its responsibilities during the 1880s and quarantine stations were constructed at a number of Queensland ports. One was to be established at Cooktown, using the area set aside for the *Thales,* despite it being part of an Aboriginal Reserve. The locality was called "North Shore" because it is separated by the estuary of the Endeavour River from Cooktown itself.

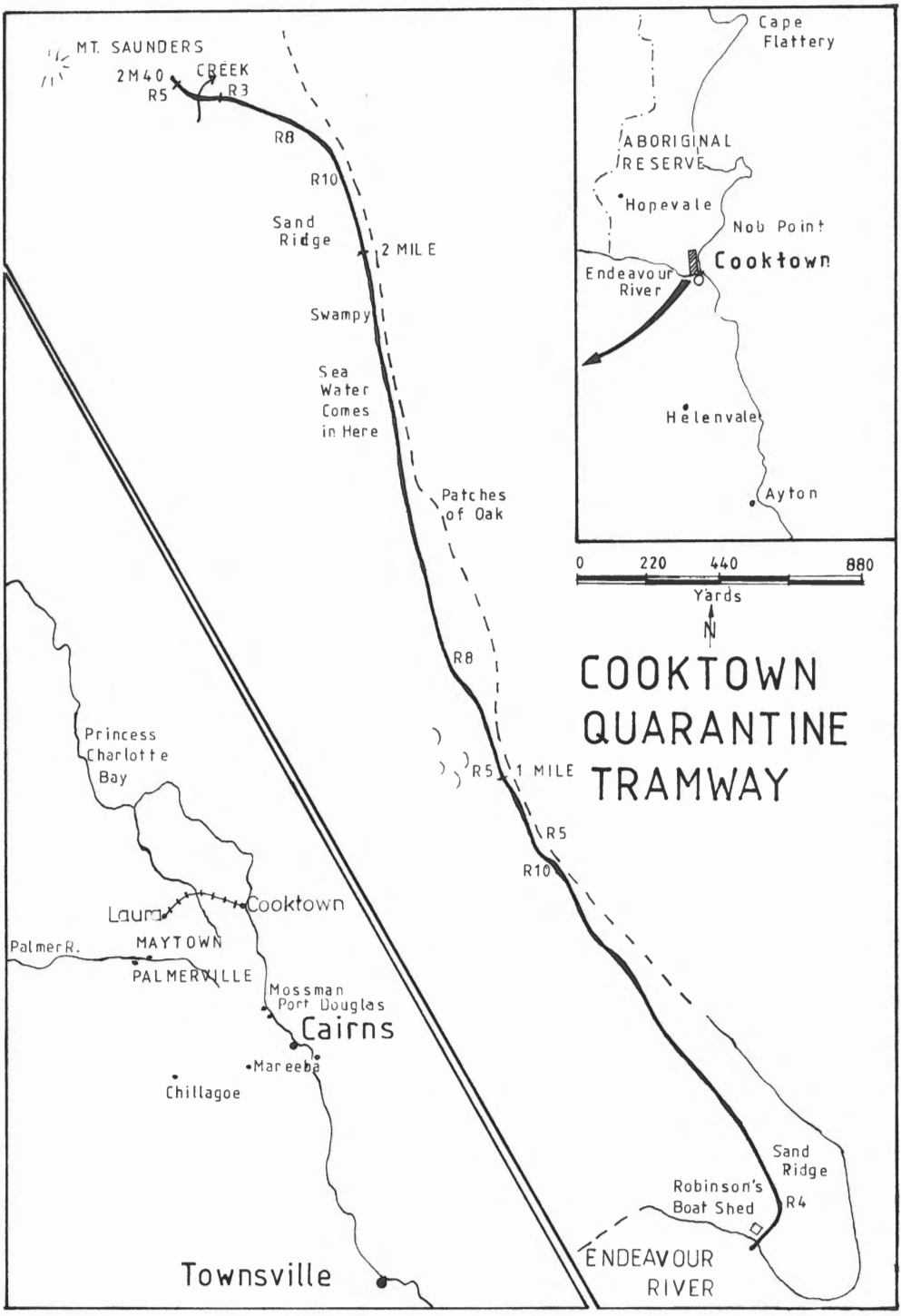
Specifications for the Cooktown station were drawn up in 1885 providing for five blocks of buildings, hospital block, married couples ward, identical single women's and single men's wards and a store block with closets. Wooden construction was specified throughout, the ironbark frames resting on bloodwood stumps. These were to be charred and twice tarred with hot coal tar and sand capped with 24 gauge galvanised stump caps projecting three inches all round as protection against the ravages of the north's termites. The entire complex was to be fenced around in six feet high galvanised iron.[4]

A form of access to the quarantine station site had to be obtained before construction could begin. Originally a jetty was proposed but on 2 September 1886 the Colonial Secretary, whose department was responsible for quarantine in Queensland, asked the Public Works Department to report on the possibility of laying a tramway to the site.[5] A trial survey was made later that year from Point Saunders on the North Shore opposite Cooktown two and a half miles (4 km) north to the quarantine station site at the foot of the hill known as Mount Saunders.[6]

The contract for construction of the tramway was let at schedule prices to Messrs Trotter and Bolles, and was signed on 25 November 1887.(7) Meanwhile the file was sent to the Locomotive Engineer, presumably for advice as to the appropriate form of traction to adopt.[8] The sandy nature of the country would have made horse traction difficult but no steps are known to have been taken to obtain a steam engine and it would scarcely have been warranted.

Shifting sand caused trouble during construction and progress was slow and unsatisfactory. The lack of progress was not entirely due to the elements and progress improved markedly following the retirement of the contractor's senior partner. Grassing the slopes was resorted to to cope with the problems of shifting sand and the tramway was completed in the first quarter of 1889.[9] About 120 tons of cast rails - probably iron rails removed from the original railway from Ipswich to the Darling Downs - were used in the tramway. Its construction cost £1855 0s. 1d which came out of the Immigration Loan Vote.[10]

The tramway traversed sandy and ridgy country and no culverts were required. The steepest grades were 1 in 15 and these were used fairly regularly to climb over the sandy ridges with a minimum of earthworks. There was one bridge, near the end of the tramway at 2 miles 35 chains, over the only creek. The deepest cutting was 50 chains (1 km) from Point Saunders, one and a half chains long and eight feet deep at the centre. The highest embankment was nine feet high and the most severe grade, approaching the first half mile point, averaging 1 in 19. Five chain curves were freely used to obtain suitable grades with a minimum of earthworks, but



the majority of the line was straight, closely following the seashore northward. There was a single four chain (80 metre) radius curve near the southern terminus at Robinsons' Boatshed and a short three chain radius curve used at the southern approach to the one creek crossing in order to cross the creek at right angles. Near one and three quarter miles, the route crossed a swampy area so low that the seawater washed over the tramway at high tides.[11] Although the gauge is unknown, it was either two feet or two feet six inches and so the curves were not sharp for the gauge.

The Colonial Secretary asked the Railway Department to take over the tramway on 25 June 1889, along with the ferry boat linking the North Shore with the town and expected the Railway Department to put the tramway under the control of its Maintenance Department.[13] However the Cooktown quarantine station was never built. The only construction on the North Shore remained the refuge for lepers, a 20 by 10 feet rectangular building designed for four but which was forced to accommodate seven in October 1888. The situation was unsatisfactory and the decision to use the North Shore as a quarantine area conflicted with its designation as an Aboriginal Reserve with plans to establish a mission, today known as the Hopevale Mission. In March 1889 the Police Magistrate at Cooktown, George Murray, recommended removal of the leper station and the buildings were subsequently burnt.[14]

The tramway was forgotten until October 1891 when Sir William MacGregor, Administrator of British New Guinea, was inquiring about the purchase of some wagons and light rails for a tramway for filling in six or eight acres (three hectares) of swamp on Samarai Island and rebuilding the wharf there and for extending the wharf at Port Moresby. MacGregor said he understood suitable used rails were available at Cooktown and asked for the wagons to be built at Cooktown by the Railway Department there.[15]

Old 40 pound (20 kg/metre) rails were available - 142 of them 20 feet long or enough for 1420 feet (433 metres) of track. They were on the North Shore at Cooktown, surplus from the quarantine tramway construction, and were offered for £4 per ton. If these were not enough, more surplus rails could be supplied from other ports. MacGregor thought the price high for rejected material and said he would require 400-500 yards (450 metres) of rail plus two tipping wagons, one each for Port Moresby and Samarai. He requested a size and weight suitable for pushing by eight or ten men, similar to the wagon built by the Railway Department at Cooktown in 1890 for the London Missionary Society. Construction was put in hand in February 1892 and they were completed at a cost of £39 4s 3d and placed aboard the *Merrie England* on 4 May[16] for shipment to British New Guinea.

No decision had been made about the rails and when the matter was again raised, it was at first thought that the only rails available at Cooktown were 40 odd damaged rails previously used as a bed for stacking spare rails on the railway wharf. WS Prewett, Officer in Charge of the Cooktown Railway, had no other rails under his control except for new ones stacked at the inland terminus, Laura. He knew there were spare rails on the North Shore but they were controlled by the Immigration Department, and as well, he realised the cost of bringing them to Cooktown would be high. The ship sailed without any.

Some rails were finally taken by the *Merrie England* in July, sixty of them supplied at £2 per ton, the same rate as applied to those supplied for the leper station. More rails were needed in New Guinea and on 14 September, the Secretary for Railways in Brisbane, AW Prewett, reminded the Under Colonial Secretary of the existence of the Cooktown Quarantine Tramway. He wrote that:

> The tramway has never been used, nor does there appear any probability of its being ever used.
>
> There are in the roadway about 120 tons of rails and fastenings, and I am to suggest to you that if the material were taken up and stacked near the Jetty, it could be availed of by the Department under your control when considered advisable.[17]

The Police Magistrate at Cooktown, HM Chester, confirmed on 8 October 1892 that the tramway was "utterly useless". In a more detailed report on 31 October 1892, he wrote:

> The tramway to the Quarantine Station, some two and a half miles, is undermined in places, and in others buried in the sand. The sleepers are all hardwood, but the rails are condemned stock. Some time ago tenders were called to remove the tramway when ten shillings per ton was the lowest offer. If tenders were called now, it is probable that owing to the Batavia River rush, the cost would be much greater. I would suggest that the tramway be sold as it now lies, the purchaser to remove it.[18]

On 15 November 1893, the Premier Sir Thomas McIlwraith telegraphed Chief Railway Commissioner John Mathieson that Sir William MacGregor in

The former Queensland National Bank (now Westpac) at Cooktown in 1973. Photo: John Kerr

New Guinea wished "to borrow 500 yards of iron rails with fittings from Cooktown". These were obtained from the Cooktown Quarantine tramway. Subsequently, the Secretary for Railways, forwarded a voucher for £15 1s 1d to the Under Colonial Secretary on 26 May 1894 "for labour, lighterage; etc., in connection with a quantity of iron rails and fastenings part of the Quarantine Tramway at Cooktown) supplied to the New Guinea Government". The Principal Under Secretary WE Parry-Okeden redirected the voucher to the Government Secretary in British New Guinea and payment was received and forwarded to the Secretary for Railways on 5 September 1894.[19]

This would seem to be the final dealing the Colonial Secretary had with his department's unsuccessful venture into the tramway field. A visitor in 1915 noted the route of the tramway visible but the rails had been removed leaving only the sleepers.[20] Shifting sand and termites have had another 70 years to obliterate what then remained of the ill-conceived tramway.

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9. *CR* 1888 p.122.
10. A.W. Prewett to Under Colonial Secretary 14.9.92, letter 11094 of 1892, COL/A716; Immigrant Agent to Col. Sec. 12.10.92, letter 12299 of 1892, COL/A716, QSA.
11. Section of Cooktown Quarantine Tramway, SC48, QSA. The plan is still held at the Chief Engineer's Branch, Railway Department.
12. J.W. Knowles, *op.cit.*
13. Letter 5379 of 1889, COL/A582, QSA; letter 6203 of 1889, COL/A585, QSA.
14. Queensland Parliament *Debates* 57, 117; letter 89/1053, WOR/A252, QSA.
15. Correspondence top-filed at letter 94.5914, COL/A780, QSA.
16. *Ibid.*
17. Letter 11084 of 1892, COL/A716, QSA.
18. Letter 13597 of 1892, COL/A716, QSA.
19. Correspondence top-filed at letter 94.5914, COL/A780, QSA.
20. J.W. Knowles, *op.cit.*

THE LAVERTON EXPLOSIVES TRAM

by Norm Houghton

Governments have always been concerned that the storage, handling and transport of explosives be exercised with due care and, preferably, be carried out away from centres of population.

The growth of Melbourne throughout the 1880's caused the then existing central explosives magazine at Marybinong to become an inappropriate place, so alternative locations were sought. During the early 1890's, a new site was decided on fronting Altona Bay, south of Altona and east of Laverton, in the marshy, uninhabited paddocks belonging to George Chirnside.

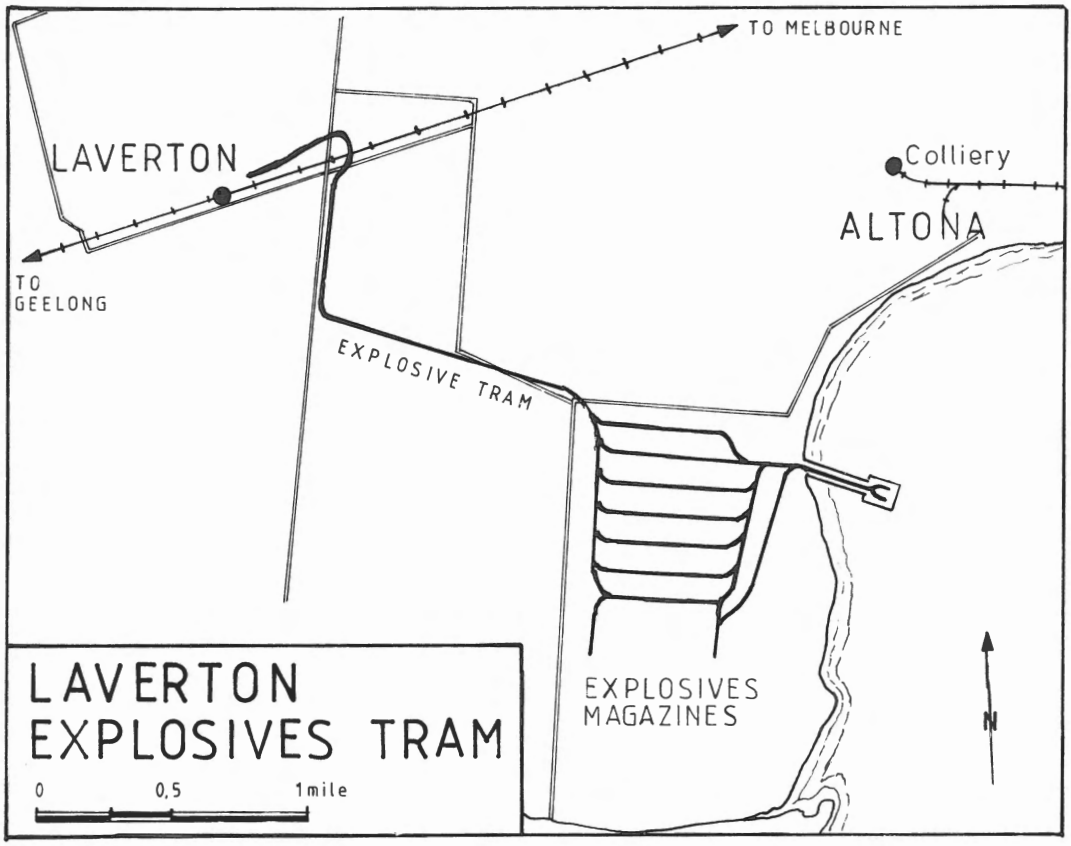
On 16 November 1896 the Victorian Parliament passed the *Powder Magazines Act 1896* to provide for the acquisition of 554 acres from Chirnside for use as a powder magazine. The Act also included a Section and attached Schedule that empowered the Board of Land and Works to construct and maintain a tramway both within the magazine reserve and west to the Laverton railway station. Management of the reserve and operation of the tramway was vested with the Commissioner of Trade and Customs.

The land was acquired in 1897 and construction commenced soon after. A jetty for the import of explosives was built into Altona Bay and on the land behind this was installed 26 magazines served by five tramway sidings. The iron rail tramway was of 2ft gauge and horses were used to haul the explosive trucks.

The access tramway to Laverton ran west from the north-west corner of the reserve and then north along road reserves to the railway station. The *Powder Magazines Act 1896* described the tramway route in detail as follows:

> Commencing at a point on east side of public road one hundred links bearing S. 7° 59' from north-west corner of allotment 4, section 5, parish of Truganina; thence three chains twenty-five links on a curve of eight chains radius crossing intersection of public roads west of said allotment 4, section 5, to a point in centre of

A horse shunts explosives vans on the Altona Bay jetty.
Photo: *Herald-Sun*, courtesy JL Buckland



public road between allotment 4, section 4, and allotment 3 section 6; thence seventy-one chains twenty links bearing N. 74° 13' W. along centre of road between allotments 4 and 5 of section 4 and allotments 3 and 1 of section 6; thence eight chains forty links on a curve of six chains radius passing through portion of allotment 1 of section 6 to centre of public road between allotment 3 of section 3 and allotment 1 of section 6; thence forty-two chains or thereabouts bearing N. 5° E. along the centre of public road between allotments 3 and 3A of section 3 and 1 and 2 of section 6; thence nine chains twenty-five links on a curve of eight chains radius to proposed siding within railway reserve near Laverton Station.

The total length of the tramway as originally built was thus 133 chains or 1½ miles. A plan dated 1915 shows the tramway terminating on the south side of the Laverton station but at some later date the line was carried to the north side of the railway by means of an underpass at the Melbourne end of the station.

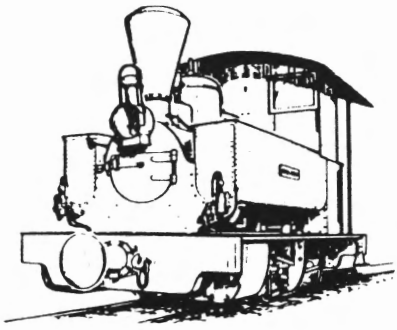
An explosives receiving shed was erected at Laverton to store the explosives prior to despath by rail. Special instructions applied to the shunting of the siding to ensure steam locomotives did not come near the explosives.

The Magazines opened for use on 1 May 1901. A photography from the *Leader* recorded several views in June 1901.

The capacity of the reserve was expanded from time to time until 61 magazines and nine tramway sidings were provided for. The tramway to Laverton was used until the middle of World War II when road cartage took over. Inside the reserve the tramways remained in service until 1962 when the site was closed due to the encroachment of residential areas.

References

Powder Magazines Act 1896; Leader, 15 June 1901; Topographic Maps; *A History of Altona* by Altona Historical Society, 1974.



LETTERS

SLOCOMB AND WALKER: LR83 I enjoyed Ralph Alger's description of Slocomb and Walker's "impermanent way" immensely. The rough and ready construction of the tramway was typical of many short term bush lines constructed by Victorian sawmills and I congratulate Ralph for his efforts in tracing and recording the remaining relics of this line in what is today, very dense scrub.

By the way of explanation however, I offer the following additional information concerning a couple of Ralph's queries in the article.

Reference is made to the reconstruction of the old State Mill log tram following the purchase of the mill by Slocomb and Walker from Gerry Germano in 1926. This mill was located on the Latrobe River at Nayook West and was subsequently worked by Slocomb and Walker at that site until 1929 when the plant was shifted to the Bunyip fall on Tin (or Slocomb) Creek. In other words there was no snigging of logs from one tram to the other. The tram referred to was the one leading south from Nayook West. The map on page 11 is therefore slightly misleading in showing Germano's mill at the State Mill site on Pioneer Creek. This was the later site of the State Mill, the earlier one which was eventually purchased by Germano and then Slocomb and Walker was at Nayook West.

A summary of the dates of Slocomb and Walker's mills would read as follows:

1921-26 (burnt)	Head of Bjorkstens Creek
1926-29	Nayook West (purchased Germano's mill)
1929-36	Tin Creek (Slocomb Creek)
1936-38	Head of Bjorkstens Creek (i.e. back to the original site)

MJ McCarthy
The Basin, Vic.

KERANG AND KOONDROOK TRAMWAY, VIC. Enclosed is a print of a former Kerang & Koondrook Tramway wooden box van taken at Koondrook in December 1967. The occasion was an Association of Railway Enthusiasts steam tour from Melbourne to Koondrook and return.

The rail layout at Koondrook was quite odd. After passing the station in the street, the track curved left to run parallel to the river bank and into a sawmill. There was a trailing connection from the goods sidings, which were along the river bank. A turntable had been located in the V of the trailing connection. The wagon was located alongside the goods siding and the lettering on its side read:

SHIRE
OF
KERANG
KOONDROOK
TRAMWAY

I do not know what became of the wagon. A former K&KT flatwagon was restored and is now on display at the water tank museum in Kerang (see *Newsrail,* Jan. 1973, p.7 and November 1973, p.226).

I thought that the Yallourn article in *LR82* was excellent - one of the best articles ever, and covering a system which was always something of a mystery.

RB Smith
Surrey Hills, Vic.

FEDERAL TIMBER COMPANY AND TRAMWAY I refer to the letter from Mr G Johnson under the above heading published in *LR70* wherein he relays the information that the Federal Timber Coy used tractors as the motive power on their 4 foot gauge wooden-railed tramway

Former Kerang & Koondrook Tramway wagon at Koondrook, December 1967. Photo: RB Smith

from their old mill to the Starvation Creek Tramway.

The information given to Mr Johnson appears not to have been correct, at least for the period up to 1928, although it may have been so for a later time.

Certainly, horses appear to have been the only motive power until late 1928 as a report to his superiors (dated 8-8-28) by Mr J Lakeland, Forest Engineer of the Forests Commission of Victoria dealing with the proposed use of a steam locomotive over Richards & Sons' Tramway and specifically referring to past and present motive power of the tramways feeding that line states "For haulage purposes horses are still used by the Federal Timber Coy —". No mention is made of the use of any other motive power.

CA Bevan
Kallista, Vic.

BEYER PEACOCK B/No. 1876: LR80 I recently unearthed a builder's photograph of Beyer Peacock No. 1876 of 1879 built for the Newcastle Coal Mining Company where it was named *Newcastle.* It provides a useful addendum to the information on this locomotive provided in *LR80.*

SHARP STEWART B/No. 2030: LR80

Recently an acquaintance arrived on my doorstep with a photo he had found in an old book which he 'thought' was taken in the Castlemaine district of Victoria. Did I know what it was? I could only guess hopefully that it might be the loco reputed to have worked on the short-lived timber tramway ex Elphinstone (near Castlemain) in the mid-1920's *(LR27).*

The original print was, unfortunately, somewhat stained and faded while the lower front of the engine was obscured by the photographer's thumb print, but it clearly depicted an 0-6-0ST locomotive with outside frames and cylinders, suggesting a rebuild of something: but what?

Then, glancing through *LR80,* I found a photograph of what is patently the same loco in a very different location, apparently in Western Tasmania and that suggests the Mount Lyell Railway, which had, as we know, two conventional 0-6-0 tanks on

its books in the early days *(LR78)* - *Carbine* (Hudswell Clark 271 of 1885) and *Malvolio* (the rebuild to 3ft 6in gauge of the former Mersey & Deloraine Tramway's 0-4-0ST by TGR, said to be Sharp Stewart 2030 of 1870).

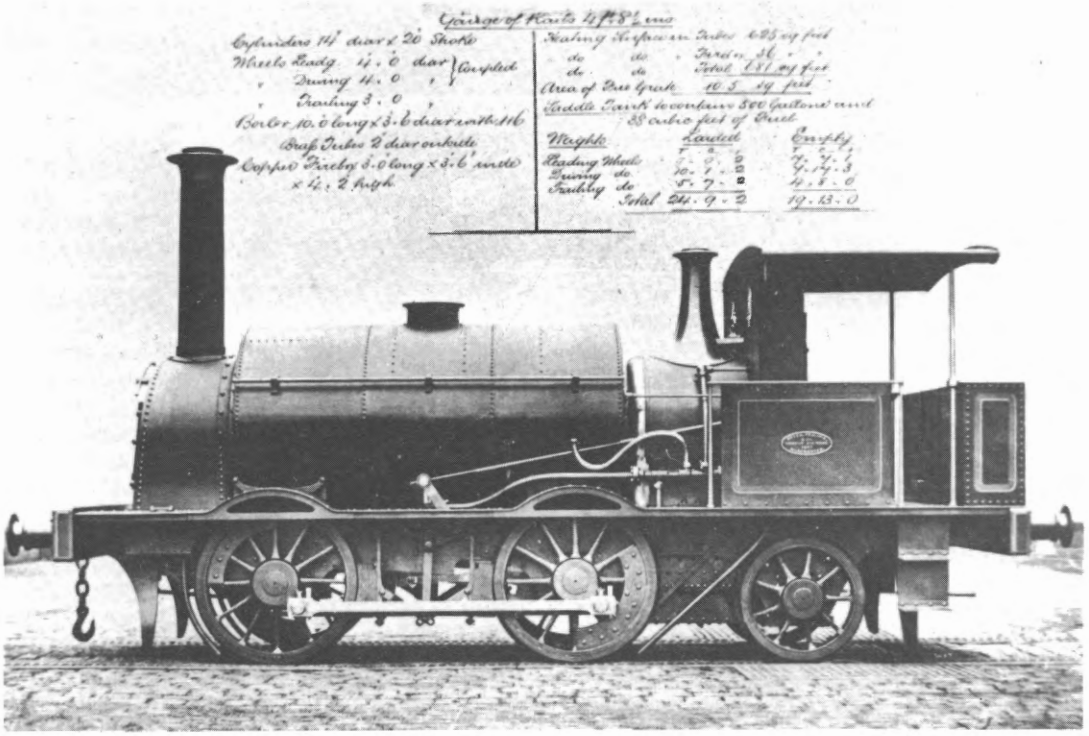
The latter was sold by Mt Lyell and is alleged to have gone to a 'Victorian timber mill' (unspecified). I have long wondered whether in fact this was so, as heretofore no trace has been uncovered of *Malvolio* in Victoria. Comparison of the photo on page 16 of *LR80* with the enclosed leaves no doubt that they are one and the same engine, so if the Tasmanian picture is of *Malvolio, ipso facto* here is proof that it is the rebuilt Sharp Stewart regauged with outside frames. What is more, I doubt that the picture was taken anywhere in Tasmania, and the probability is that it is a scene on the ill-starred Elphinstone line in redgum country, hauling logs on proper railway wagons bought by this enterprise from Queensland Railways, the wheel flanges and treads of which are certainly not the usual tramway size and profile.

I am indebted for the photograph to Mr D Berryman.

MARIA ISLAND TRAMWAY: LR80 The lower photograph on page 15 of *LR80* shows the jetty on Maria Island off the Tasmanian east coast. The tramway is the 2ft gauge line used in connection with the short-lived cement industry thereat, on which worked an 0-4-0WT supplied by Robert Hudson, Leeds (Hudswell Clarke 1423/1922). The loco ended its days on the 2ft gauge section of the Corrimal Coal & Coke Pty Ltd colliery line on the NSW South Coast (*LR60*).

JL Buckland
East Brighton, Vic.

TASMANIAN SCENES: LR80 Following my letter on Sharp Stewart No 2030 in *LR83,* John Buckland has now sent me a photograph of the locomotive taken about 1925. John suggests that the photograph was taken outside Tasmania, possibly on the timber tramway at Elphinstone, Victoria. Now, consulting my own notes, I find I have under this heading, "second-hand loco from



Beyer Peacock No. 1876 of 1879.

Sharp Stewart No. 2030 of 1870, believed to be on the Elphinstone line in Victoria.
Photo: courtesy D Berryman

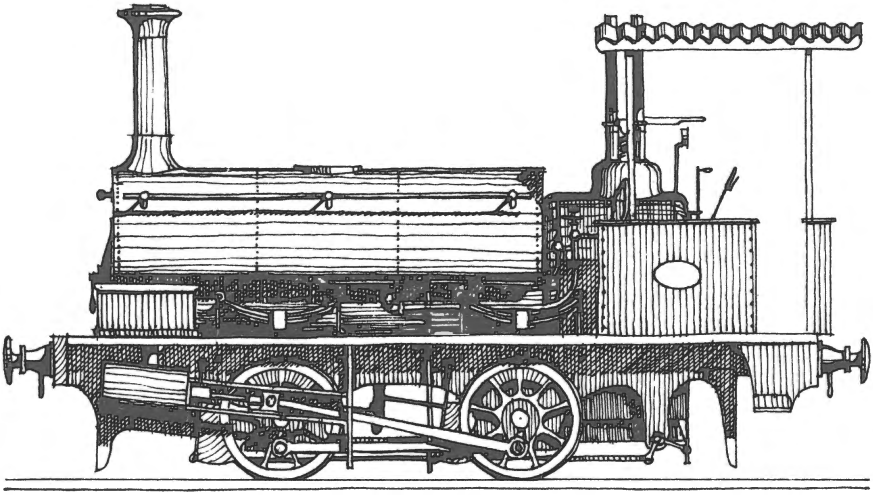
Tasmania in use 11/1923 . . . possibly SS2030 . . . out of use by 1927, stored in shed until sold for scrap by auction c1940 to Dickson Primer Industries, Melbourne." So it is now clear that Ray Ellis was wrong to suggest (*LR78,* p.6) that SS2030 stayed on the NMLR until 1928 and was scrapped there.

The photo on page 15 of *LR80* was, more than likely, taken on the North Mount Lyell Rly after 1903 . . .*LR78,* p.9 states that on 4/9/1903 SS2030 was being fitted with vacuum ejector preparatory to going to Kelly Basin (on the NMLR) and the centre coupling was used on that line, but not on the Mt Lyell Mining & Rly Co's line.

The photograph provided by John Buckland clearly shows how the locomotive was converted to 3ft 6in gauge. Simply, the frames were rebuilt such that the rear axle was moved forward by some 6in (the original wheelbase being 5ft 0in) so that the wheels came entirely in front of the firebox and a rearward extension to them allowed a third axle to be added, at a spacing of nearly 6ft 0in, so that its wheels were behind the firebox. The new or rebuilt frames were, presumably, moved slightly outwards and, as they were now outside rather than inside the wheels, the hornplates were transferred from the inner to the outer face to minimise the additional space required between them. This uneven spacing of the wheels gave the locomotive a somewhat ungainly appearance below the running plate. Above, however, there was little change; the boiler, saddletank and cab remaining unaltered. Use was made of teh extra frame length to provide a bunker, about 1ft 6in deep, across the rear of the locomotive (the limited bunkers having previously been in the cab side sheets). I have prepared the enclosed drawings to illustrate the loco before and after conversion.

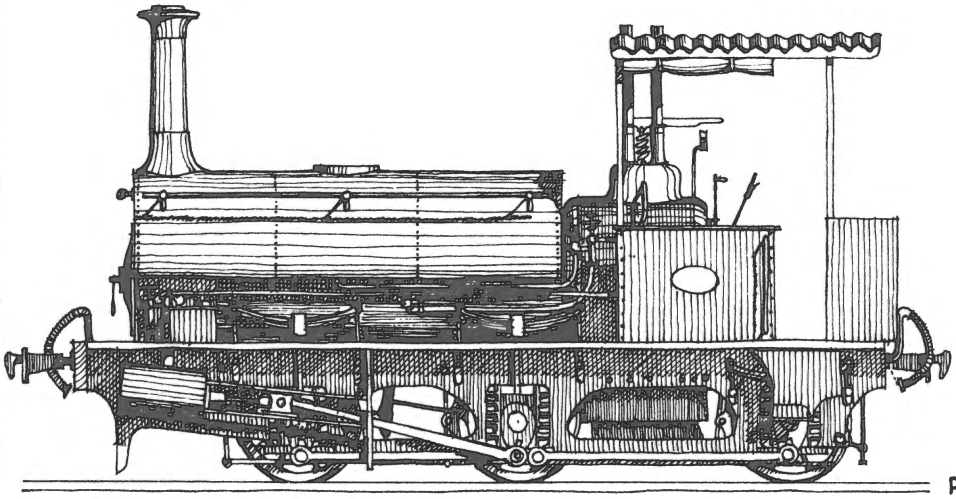
Finally SS2030 was built in 1870, although ordered in 1869.

Richard Horne
Surrey, UK



AS BUILT FOR MERSEY & DELORAINE TY., TAS., 4'6" GAUGE

0 5 FEET



R.T.HORNE 1/84

AS REBUILT TO 3'6" GAUGE AND RUNNING ON NORTH MT. LYELL RLY., TAS., 3'6" GAUGE

SHARP STEWART & CO. LTD., ATLAS WORKS, MANCHESTER 2030/1870

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