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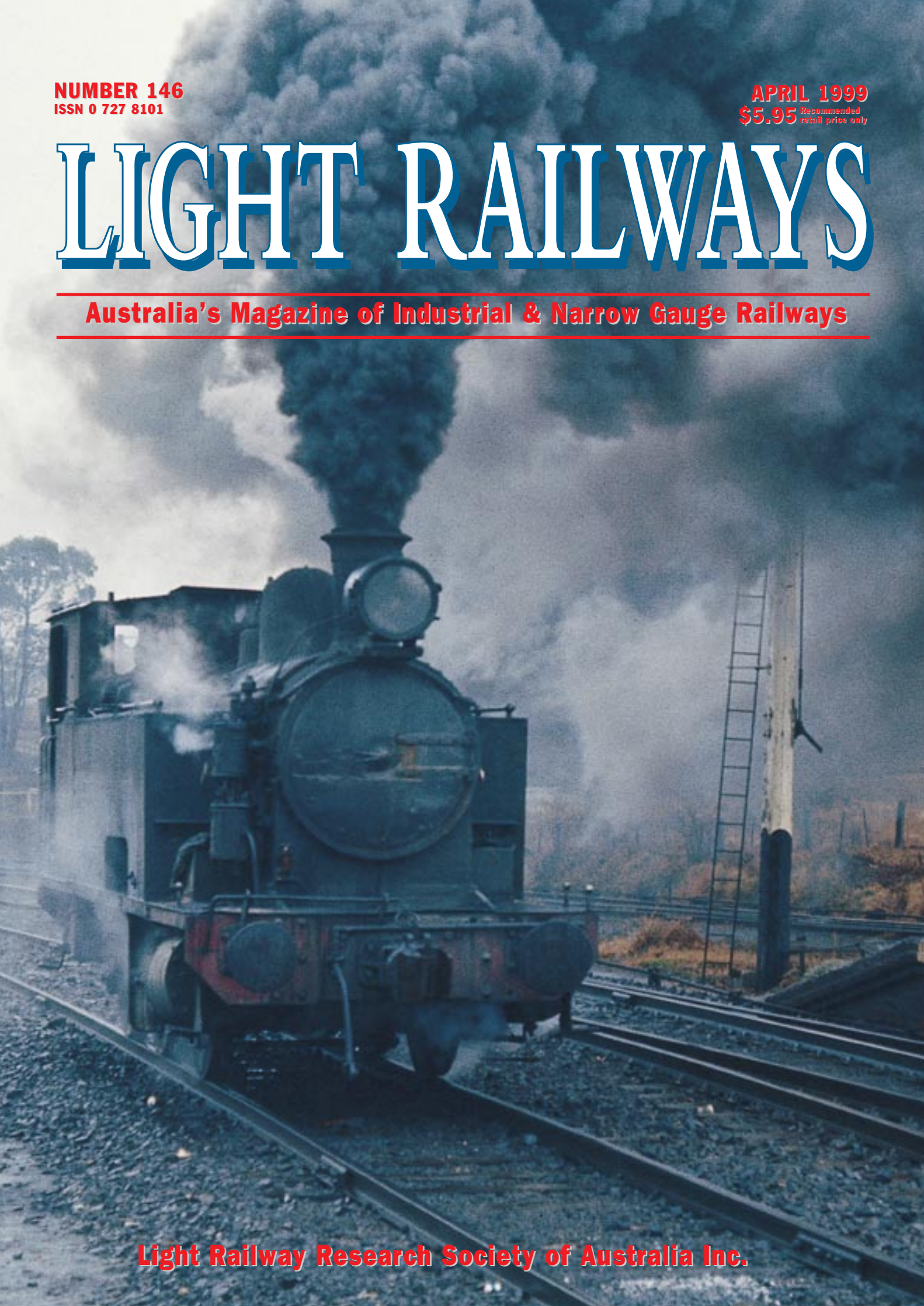
LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



Light Railway Research Society of Australia Inc.

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Australia's Magazine of Industrial and Narrow Gauge Railways

No 146 April 1999
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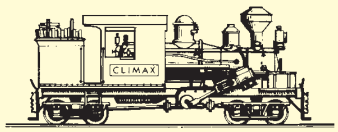

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1 inch (in)	25.40 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metre
1 mile	1.60 kilometres
1 super foot	0.00236 cubic metre
1 ton	1.01 tonnes
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts
1 gallon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

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Comment

It was the best of times, it was the worst of times. Charles Dickens' words seem an appropriate summary of the days' events at the well-patronised Timbertown, Wauchope auction (see page 29) which I've just attended.

It was the best auction of its kind, in quite some time, for those in search of a bargain. However, with a few exceptions, it must have been, if not the worst, then surely a disappointment for the vendors, as it was for those of us who fear that the will to preserve such items of industrial heritage, so strong in the 1970s and 80s has, for whatever reason, lost its momentum.

Perhaps we're all simply too poor these days, or have too much on our plates. Perhaps there's even a glut of locomotives and such (unthinkable in the 1970s)!

For the record, John Fowler 0-6-0T 12271/1910 *THE GREEN HORNET*, to many the very symbol of Timbertown, was passed in at $32,000 (though we later heard that a deal had been struck to sell it at its reserve price of $35,000).

As you may have noticed, this year has seen an increase in the number of our colour pages. Thanks to the ingenuity (and generosity) of Courtney Colour, this has been achieved without any increase in printing costs, so our cover price remains the same. We hope you enjoy issue 146, our most colourful to date. *Bruce Belbin*

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

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

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

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

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

Front cover: *Having dropped off two loaded bogie cement hoppers in the exchange sidings at Portland, NSW, Commonwealth Portland Cement Co. No.3 (AB 1234/1911) blankets the yard with thick coal smoke as it begins its short journey back to the works, 1¼ miles distant, in June 1974. Photo: Bruce Belbin.* ***Back cover:*** *In December of the same year, No.3's younger and more powerful sibling, CPC No.5 (AB 1470/1916), is seen from the High Street bridge as it brings a pair of loaded cement hoppers up the steep grade from the works. Photo: Graeme Belbin. See 'Portland Cement' on pages 14 & 15.*

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One Hundred Years Ago...

...on 29 April 1899, the Victorian Railways' narrow-gauge line from Wangaratta to Whitfield opened for business.

The first of five 2ft 6in gauge railways built to develop rural areas at low cost, the 30 mile line was very nearly built to 2ft gauge instead, having been authorised as such on 24 August 1897. Its gauge was subsequently broadened to 2ft 6in under instructions issued by the Minister of Transport on 24 February 1898, just five days before work began.

In making his decision, the Minister was acting largely on the advice of the Chief Engineer of the Queensland Railways, Mr H.C. Stanley, and the findings of a report by Mr E.R. Calthrop, late Assistant Locomotive Superintendent of the Great Indian Peninsula Railway. Calthrop had gone so far as to state "There is no doubt that, as compared with all others, it is the gauge possessing the greatest carrying capacity per cent. of cost of track...".

The second of the VR's narrow-gauge lines ran 18.22 miles from Upper Ferntree Gully to Gembrook, and commenced operations on 18 December 1900. (The Belgrave to Gembrook section of this is now the famous Puffing Billy Railway.) Next came Colac to Beech Forest (29.66 miles), opened in 1902, a short (3.23 miles) horse-worked line from Welshpool to Port Welshpool, in 1905, and Moe to Walhalla (26.06 miles) in 1910. (A section of the Walhalla line is now back in operation, also.)

Finally, in 1911, the Beech Forest line was extended a further 14.11 miles to Crowes, giving a total narrow-gauge route mileage of 121.77.

To power the trains on the Whitfield line, two 2-6-2T locos were purchased from the Baldwin Locomotive Works of Philadelphia, USA (B/Ns 15936 and 15937 of 1898) and these became 1A and 2A of the Narrow Gauge 'A' class (later changed to 'NA' class). As other lines opened, and traffic grew, Victorian Railways built a further 15 'NA' class locos, at their Newport workshops, the last entering service in 1916.

In Phil Belbin's evocative recreation above, we see 1A hauling a mixed train on the Whitfield line in 1899. The original 'NAs', and their Australian clones, had a charmingly American appearance, and subsequent modifications (such as ash chutes, British-style smokebox doors and the removal of their cowcatchers) could not erase that charm.

Sadly, the subject of our painting went to scrap in 1929, but six of its progeny survive, all on the Puffing Billy Railway (four of them currently in working order). In addition, the Walhalla Goldfields Railway plans to build two new machines when funds permit. So the raucous beat and shrill whistle of an 'NA' should continue to be heard on the narrow gauge lines of Victoria for at least another century. *Bruce Belbin*

Sources: "The Narrow Gauge Question" W. L. Hanks, *Light Railways* 135, January 1997 • *Speed Limit 20*, E. A. Downs, ARHS 1963 • *G42, Puffing Billy's Big Brother,* G. Hocking, R. Peach, J. Thompson, PBPS 1980 • *The Narrow Gauge* (Journal of PBPS) various issues

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Forster's Butter Factory Railways

by Jim Longworth

While the Forster breakwater railway, on the NSW north coast, has been described before[1], readers may be interested to know of two other light railways which served one of the industries of Forster long ago.

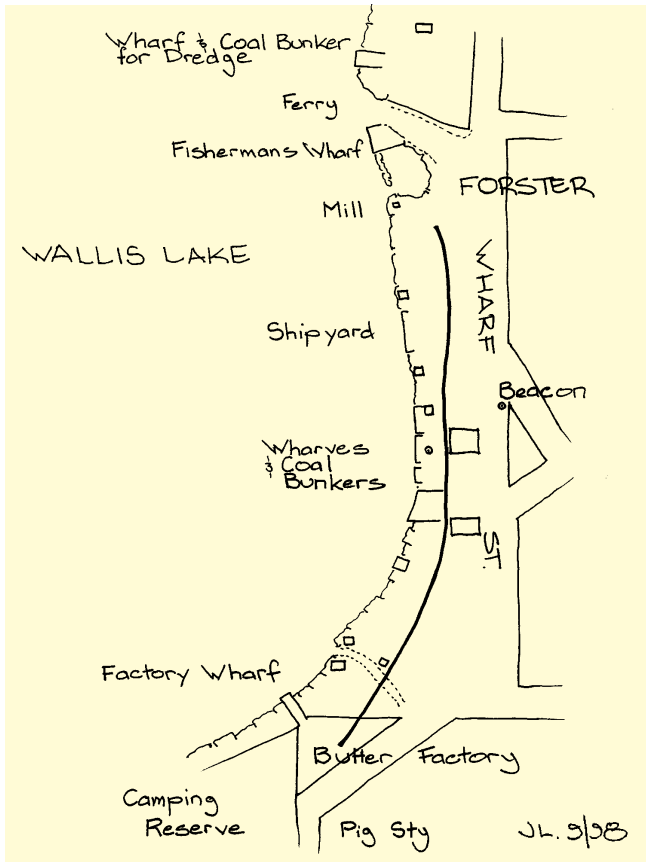
After much planning, the Cape Hawke District Rural Co-operative Society Limited started construction of a butter factory on the southeastern shore of the entrance to Wallis Lake at Forster in 1917. Cream for the factory came by cream boats from farms around the lake, the Coolongolook River, Wang Wauk River, and Wallamba River areas. Originally powered by steam, the factory was later converted to diesel, and finally closed in 1958[2].

Three times a week in summer and twice a week in winter, the cream boats delivered their loads of cream to the butter factory wharf at Forster. At the factory wharf, the cans of cream were picked up from the cream boats and loaded onto a trolley, which was run along rails from the wharf up to and through the big double doors of the butter factory, wherein the cream was processed[3]. The manufactured butter was shipped out to Sydney, presumably from the wharf, via the trolley line.

The steam required for cleaning down the butter factory and its utensils, as well as driving the pumps of the ice making machinery, was produced from wood fired boilers. The boilers were fired with scrap timber and sawdust drawn from the local sawmills which were scattered along the waterfront.

The second line ran from Porters Sawmill, through Wright Park, past the Wright Mill, across the back of where the Fishermans Co-operative was built (sometime after 1946), thence across the extension of South Street, and so to the boiler room of the butter factory[4].

The line was constructed of wooden rails which were spiked to timber sleepers. The motive power was a draught-horse named Pilot. Pilot had a foot problem which was treated with blue-stone so giving his feet a deep blue colour.



The old brown horse, with his bright blue feet, slowly pulled a large trolley of timber off-cuts and sawdust along the line, with a Mr. Tom Batchelor walking along beside him[5].

The sawdust line remained there until into the 1940s.

Thanks to Roger Persson for uncovering the butter factory line, and sending me the reference material.

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2 McMaster D. 1993. *Wallis Lake its Rivers and Villages*. Wallamba & District Historical Society.
3 *Great Lakes Advocate*, 9 January 1991.
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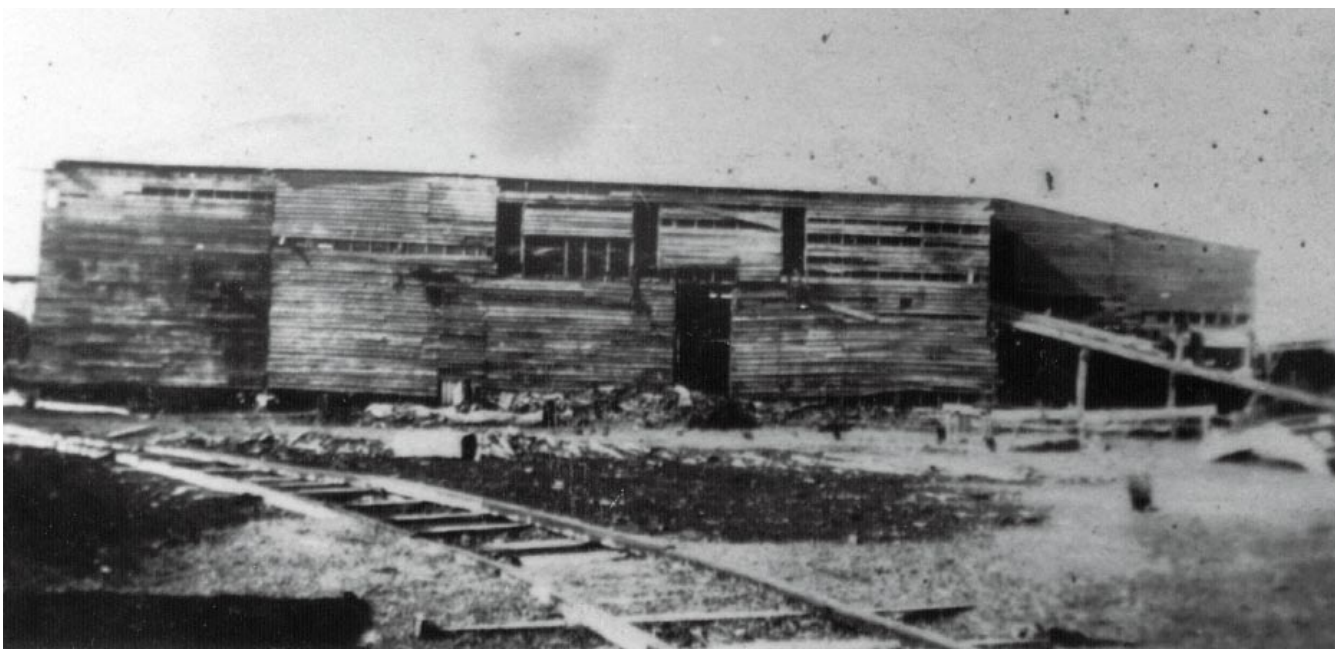

One of the mills that once bordered the shoreline. *Photo: Wallamba & District Historical Society*

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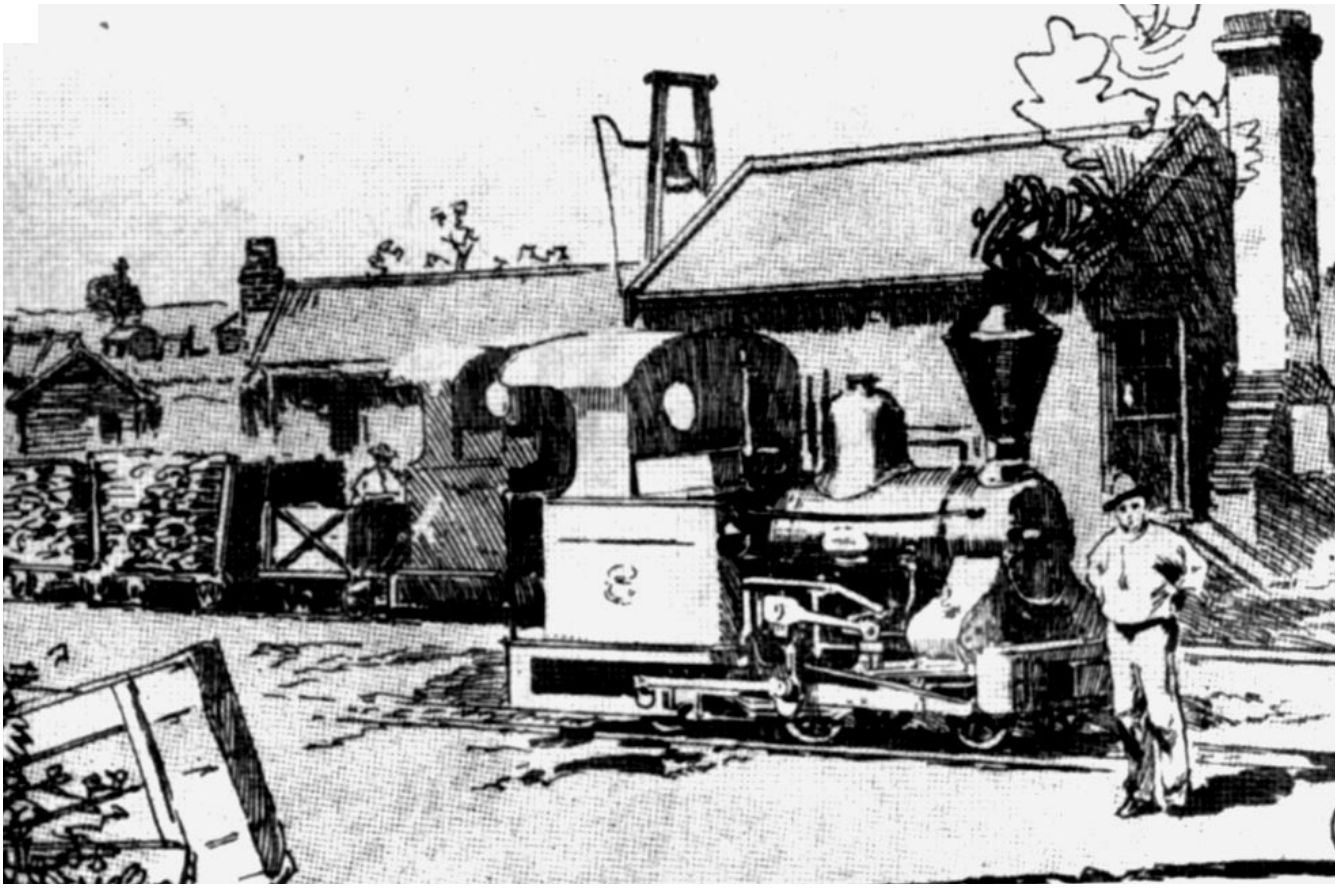

Two Fowler locomotives near the Tally Office at the Great Cobar Mine woodyard.

Engraving from Town & Country Journal, 28 April 1888.

Mort's Dock & John Fowler Locomotives of the Great Cobar Copper Mining Company Firewood Tramway, Cobar

by Ron Madden

Introduction

Research of the various industrial railways of the Great Cobar Mine in western New South Wales, has long been plagued by the lack of documentation on the early operations at Cobar, especially in the 1880s, when the mine was dependent on firewood brought in over an extensive narrow gauge tramway system.

In this article I present my findings concerning the presence of two Mort's Dock & Engineering Company 2ft 6in gauge locomotives at Cobar and the possibility that one of these locomotives was subsequently converted to standard gauge, in which guise it may have operated at the Botany Sewage Farm near Sydney. The story is presented in the hope that some readers may be able to shed more light on the subject or be prepared to accept the challenge of further research.

John Fowler Locomotives at Cobar

In 1969 John Shoebridge published a comprehensive history of the various railway systems that operated at Cobar[1]. He was able to map three 2ft 6in gauge firewood lines, but few details of the firewood tramway's locomotives and rolling stock were available at that time. Shoebridge reported that John Fowler 2-4-0T jackshaft-drive locomotives were used on the firewood tramway and that four of these were available for slag disposal operations after 1903. Subsequently, information was provided through this magazine that John Fowler Ltd. had apparently forwarded six of its 2-4-0T locomotives to the Great Cobar Mine: four in 1882 (B/No's 4370-3) and two more in 1883 (B/No's 4631-2)[2].

What has not been established is whether six Fowler locomotives actually arrived at Cobar. My research I believe, demonstrates beyond any reasonable doubt that although six narrow gauge locomotives arrived at Cobar, only four Fowlers made it there. The other two narrow gauge locomotives which arrived at Cobar were built by the Mort's Dock & Engineering Company in Sydney.

Delivery of the Firewood Tramway Locomotives

Following severe drought which had prevailed for the previous half year, in the report presented to the half-yearly meeting of the Great Cobar Copper Mining Company (hereafter referred to as the Great Cobar C/M Co.), held on 27 February 1882, the directors advised that they were unanimously of the opinion that the only way to address the firewood problem would be "by the construction of a tramway."[3] It was indicated that the directors intended at an early date to ask the shareholders to sanction the construction of the tramway. At a special general meeting held on 16 May 1882, the directors were empowered to raise a sum of about £20,000 for the purpose of constructing a tramway to facilitate the shipment of firewood to the Company's mine for use in smelting and the treatment of copper ore[4].

An order for 10 miles of 2ft 6in gauge railway, four locomotives and trucks was immediately dispatched to John Fowler & Company of Leeds, through William Noakes, Fowler's agent in Australia.[5] The mining manager of the Great Cobar C/M Co. reported by wire on 25 April 1883 of

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"having to-day [sic] commenced to bring in firewood by engines on the tramway, and everything works satisfactorily."[6]

Five important reports from or concerning the Great Cobar Mine provide, I believe, the critical evidence concerning the arrival, presence and numbers of both Mort's Dock and John Fowler locomotives at the mine. The reports are as follows:

1. The directors' report for the 15th half-yearly meeting of the Great Cobar C/M Co. held on 28 August 1883 advised "the tramway for the conveyance of firewood was opened in April last with two engines only; in order, however, to increase its capabilities, two additional and more powerful locomotives have been ordered from Mort's Dock and Engineering Company. During September [1883] the whole four [locomotives, ie. two Fowlers and two Mort's Dock - author's note] would probably be at work...[7]

2. The report of the mining captain of the Great Cobar C/M Co. for the four weeks ending 8 September 1883 (published 19 September 1883) advised "the third locomotive was received on the mine last week"[8].

3. In his next report for the four weeks ended 6 October 1883 (published 16 October 1883), the mining captain advised "Two more Fowlers' locomotives were delivered on the mine yesterday, and I expect to have these engines at work in a week from date. The branch line to the south has been so far completed as to enable me to bring in firewood from this portion of the line."[9]

4. The 1883 report of the NSW Department of Mines records, "The machinery at the mine consists of ...., a tramway of 11 miles (10½ miles already laid down), six locomotives and 84 trucks, four of the locomotives are imported and the other two [sic] manufactured in the colony."[10]

5. Following a visit to the Great Cobar Copper Mine, in mid-1884, the NSW Inspector of Mines, Mr Slee, prepared a detailed report which stated: "A tramway of which over 11 miles is constructed into a forest, is to be found at the mine, and there are six locomotives, of which two are from Mort and Co.'s, Sydney, and four imported from Leeds, England. There are also 84 trucks."[11]

The following conclusions may I believe be safely reached:

A) Only two of the first four Fowlers ordered (4370-3), and 84 trucks reached Cobar. The firewood tramway commenced operations on Wednesday 25 April 1883 using only two Fowler locomotives, the firewood having been brought in over the five miles of tramway that was ready for work, out of the 5½ miles of tramway then laid down[12]. Fowler records show that 4370/1 were scheduled for dispatch in August 1882 followed by 4372/3 in September 1882. Which pair arrived and the fate of the other pair has yet to be established, but it appears probable that 4370/1 actually reached Cobar. One of the two Fowlers which did arrive, became the first locomotive to operate on the mile of tramway available, construction of which only reached that mark in late February 1883.[13] A telegram from Cobar, dated March 5 advised: "Started to work engine on tramway this morning; trial satisfactory."[14] There were still only two Fowler locomotives operating at the mine in August 1883, even though by 14 July 1883, some 7¼ miles of tramway had been constructed[15].

B) The third locomotive which arrived at the mine in the week of 9 to 15 September 1883 was the first of the two ordered from Mort's Dock & Engineering, both having been expected at the mine by September. Ordering of the two Mort's Dock locomotives has been confirmed by Mark Langdon, whose research of Mort's Dock & Engineering Company records has revealed that the Great Cobar C/M Co. ordered them on 25 May 1883.

C) The second Mort's Dock locomotive apparently arrived at the mine sometime between 15 October and 31 December 1883, although it is possible that it may have arrived between mid-September and 15 October 1883 and its arrival not noted. Unfortunately because of a tightening up of reports from the mine, the date of its arrival does not appear to have been recorded.

D) The two Fowlers, which arrived at the mine circa 12 October 1883, were almost certainly 4631 and 4632, they having been dispatched from the United Kingdom in June 1883. Fowlers 4631/2 were apparently ordered direct by the Company, as there is no mention of Noakes (the Australian Fowler agent) in the order records.[16] The available evidence appears to suggest that 4631/2 were "replacements" for two of the original four Fowler locomotives ordered which for one reason or another did not reach Cobar[17]. Because of delays experienced in getting the rails for the tramway transported from Sydney to Cobar, two of the original four locomotives scheduled for dispatch in 1882 may have been (1) diverted elsewhere, or (2) not built or (3) altered and renumbered, the pair not being needed immediately at Cobar. Although the rails were in Sydney as of 24 August 1882,[18] (i.e. before the second pair of locomotives was scheduled to be dispatched from the UK), the Company advised that the high rate of carriage then ruling between the railhead and Cobar precluded the forwarding of the rails until that rate had fallen to reasonable levels.

Along with the high rate of carriage, it appears certain that the shipment of the rails was also held back to await the advance of the railhead to Nyngan which was scheduled for early October 1882. The railhead only reached Warren Road (now Nevertire) by October 1882, but this advance would have allowed for considerable savings in carriage costs and for shipment of the rails to commence. The line opened to Nyngan on 1 February 1883.

The apparently foreseen long delay in getting the rails to Cobar probably allowed negotiations to take place between John Fowler & Co. and the Great Cobar C/M Co., for alternative arrangements to be made for the two locomotives which had been ordered but were no longer immediately required. Alternatively the two 'missing' locomotives may simply have been lost at sea, but this appears unlikely. Even though preliminary work for construction of the tramway took place at Cobar in the four week period ending 16 September 1882,[19] rails had not been laid as of 27 January 1883. However, 300 tons of tramway material was then at the mine and 5½ miles of the route had been cleared and made ready for laying down the rails[20].

I believe that the two Mort's Dock locos were obtained only because the Great Cobar C/M Co. directors were lobbied to purchase (and more importantly to be seen to be purchasing), the local product. Placement by the governments of the day of large contracts for locomotives with overseas firms had been the cause of considerable controversy, which had periodically raged over the previous five years, with much complaint having come from local engineering firms. Two members of the Great Cobar C/M Co. board (Boulton Molineaux and Alfred Harcourt), were also members of the board of the Great Victoria Amalgamated Gold Mining Company Limited, Adelong, and were closely involved with the operations of the Mort's Dock locomotive then in service at Adelong, while Captain John Broomfield, another director in 1882, was also listed as a director of Mort's Dock &

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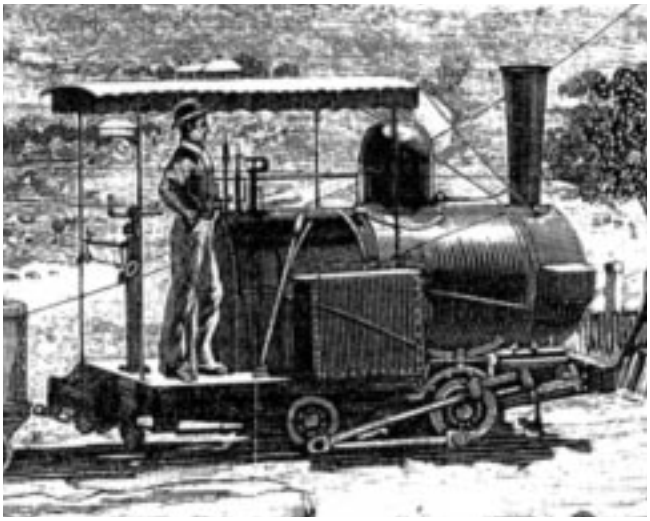

Mort's Dock locomotive at the "Perseverance Gold Mine", Adelong. Engraving from Town & Country Journal, 18 February 1882

Engineering in 1884.[21] As these three gentlemen constituted 60% of the Great Cobar C/M Co. board, the decision to order the Mort's Dock locomotives does not seem at all difficult to understand when viewed in that light.

Firewood Tramway Operations

No photographs or sketches of the Mort's Dock locomotives at Cobar are known to exist. Given that it appears that the two locomotives were disposed of by 1888, this is not altogether surprising. As both locomotives arrived virtually unnoticed some four to six months after tramway operations commenced, it seems quite probable that neither photographs or sketches of the locomotives at Cobar will ever surface.

In his report of 1 December 1883, the mining captain of the Great Cobar C/M Co. advised "I have now four engines running on the line."[22] It seems probable that with only 84 trucks then available, all six locomotives could not be put to good use. Shoebridge advised that the firewood trucks each carried about 30 cwt of wood that was cut into 5ft billets. Given this advice, it seems probable that whichever four locomotives were then operating were hauling consists of seven trucks for a load of approximately ten-and-a-half tons. Allowing for 21 trucks per locomotive, consists of seven trucks could be simultaneously loaded and unloaded at each end of the tramway, while the locomotive hauled the other seven trucks either up or down the line. This appears to have been the modus operandi intended for the four Fowler locomotives originally ordered and the 84 trucks originally available. Figures recorded in July 1884 by the NSW Inspector of Mines, J Slee, suggest that operations may have altered somewhat:[23]

Each locomotive makes four trips per day, or about 100 miles, and brings in from ten to fifteen tons of wood each trip. During the half-year ending 30th June 1884, no less than 31,000 tons of wood were brought in by the trains.

Assuming the trams operated six days per week and allowing for a few days for public holidays (say 155 days of operations per half year), then 31,000 tons of firewood would have required 200 tons to have been brought in each operating day. Taking an average load as 12½ tons and four round trips daily, then still only four locomotives would have been required on the tramway to bring in 200 tons of firewood daily.

However, given Slee's advice that loads averaged between 10 and 15 tons, it appears that consists of 10 trucks (a load of 15 tons) were hauled. Were these 10 truck consists hauled by Mort's Dock locomotives? Although constraints caused by the lack of trucks are documented as having been addressed by 1885 when truck numbers were reported to have increased by 40 to 124,[24] Slee's figures suggest that extra trucks were in hand in July 1884 thus allowing 10 truck consists to have been hauled.

In late May 1883, before further locomotives arrived, the two Fowlers, between them, were bringing in about 100 tons of firewood per day from the head of the line, some six and a half miles out[25]. In late June 1883 the two Fowlers brought in 750 tons of firewood in a week,[26] suggesting that the two locomotives worked seven days that week. In the four weeks ended 14 July 1883, the two locomotives brought in some 3200 tons of firewood. Although at this early stage the locomotives were each making five trips over the tramway per day, the shorter trips involved meant that the two locomotives covered less distances per day than as described by Slee.

Despite the fact that the 1884 "Great Cobar Copper-mining Company Tramway Act" of the NSW Parliament specifically precluded the firewood tramway from being used for any purpose other than the conveyance of firewood from Government reserve No. 633 to the Company's smelting works, the firewood tramway is known to, on at least two occasions, have been used for passenger traffic! In late May 1885, Captain Williams utilised three 'trams' to convey children to a monster picnic held about five miles from Cobar[27]. Unfortunately there is no indication of which locomotives were used. One can only imagine how the children rode on the firewood trucks which, although they had ends, had no sides and were chain coupled! The exercise was repeated on New Years Day 1886, when another monster picnic for the children of the town and district was held "out on the Company's tramline. Five special trams conveyed visitors to the ground."[28] Were five different locomotives used?

Disposal of the Mort's Dock Locomotives

Although the amount of firewood brought in over the tramway does appear to have increased with the introduction of a total of six locomotives, the increase was totally incommensurate with the extra costs involved. From 1885 onwards, the Company was faced with very low copper prices, technical problems with the treatment of ores and difficulties in obtaining sufficient firewood to transport on the tramway. The retention of six firewood tramway locomotives was apparently a luxury that the Great Cobar C/M Co. could not afford. Whether the two Mort's Dock locomotives were chosen for disposal to leave a uniform fleet of locomotives, or because they didn't measure up to the Fowlers' performance is a matter for conjecture, but there doesn't appear to be any evidence that the Mort's Dock locomotives remained at the mine.

The date/s of departure of the Mort's Dock locomotives have/has not yet been determined. However, Shoebridge advised that by 1888 only three of the original engines were then in use, but he does not state why that was the case. Despite the fact that, by late February 1888, an extension of the Company's tramline a few miles into a better wooded area had overcome difficulties in regard to timber supply,[29] the two Mort's Dock locomotives may have been dispatched from Cobar by that time. The following year, the closure of the mine itself was announced, at the twenty-seventh half-yearly meeting of the Great Cobar C/M Co., held on 27 August. The closure effectively brought to an end the life of the firewood tramway system, only months after a nine mile "extension" had been built. In a report from the Company,

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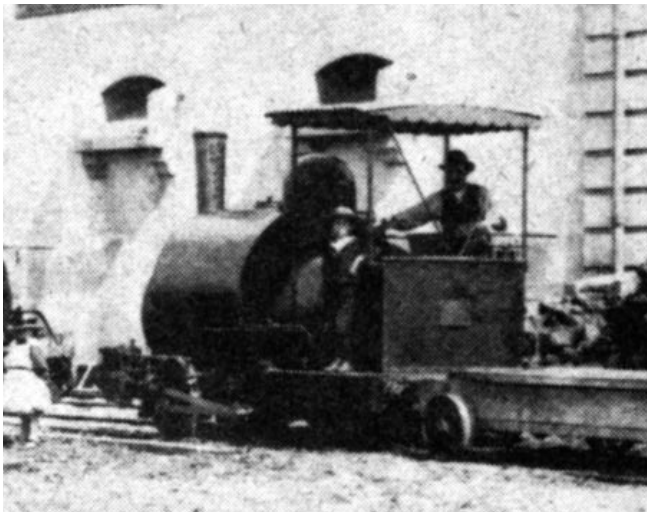


Mort's Dock 0-4-0ST locomotive at Botany, circa late 1880s. The rectangular plate on the rear cab sheet is believed to be its Mort's Dock builder's plate. Photo: Jim Longworth Collection

dated 24 March 1889,[30] it was advised that "The new tram line [branch?] is nearing completion, and in another week hope to be able to pay off eight or ten men now employed in clearing the road and fettling. To date have over eight miles of the extension in work, and a little over another mile will be required for the present."

It seems unlikely that the new line would have involved the purchase of new rails, but rather that another section was lifted and relaid on the new route. If the Mort's Dock locomotives were still at Cobar when the mine closed, it appears certain that they had long departed when the mine reopened on tribute some four years later.

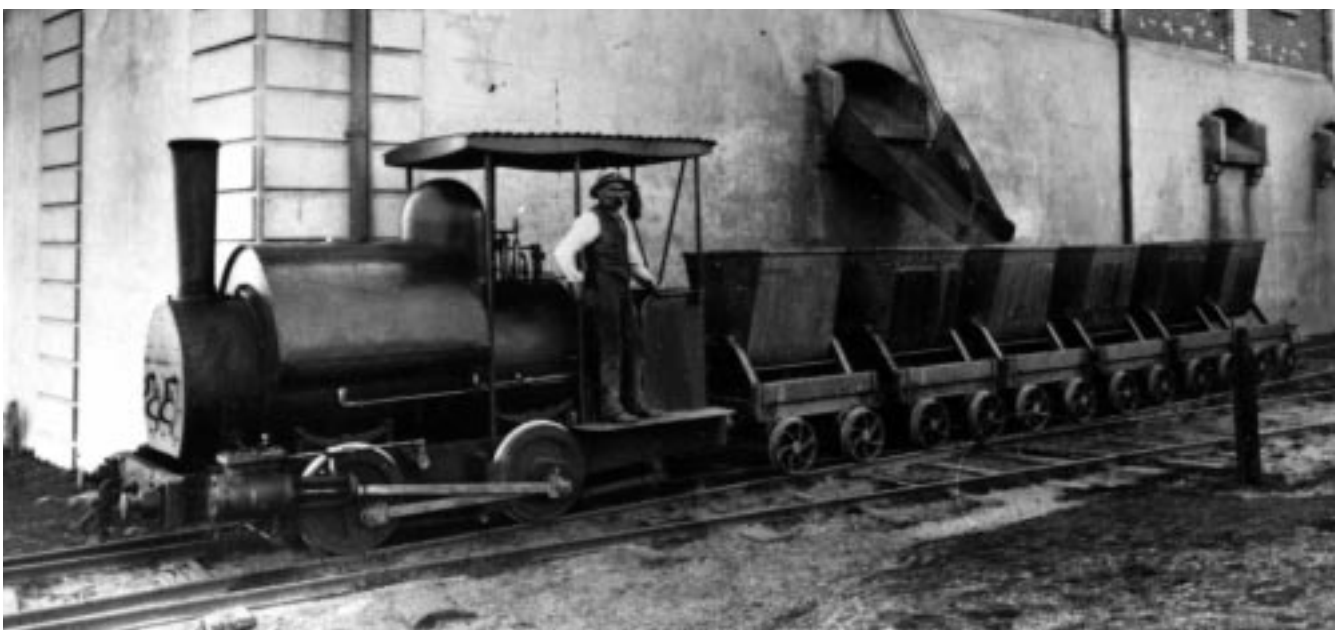
The Botany Locomotive

In his detailed history of the Botany Sewage Farm tramway,[31] Noel Thorpe, then Metropolitan Water & Sewerage Board archivist, indicated that John Young, the contractor for the syphon and related works at the Botany Sewage Farm (early 1885-early 1887), obtained for his contract at Botany a second-hand 2ft 6in gauge Mort's Dock locomotive as well as narrow gauge tipping skips, with Young having subsequently converted the locomotive and skips to standard gauge. Construction work commenced at Botany on 1 March 1885 with R.Rothwell the contractor's engineer.[32] In early January 1887 Young had advised that the Botany Sewage Farm was ready to receive sewage. Of the five known Mort's Dock narrow gauge industrial locomotives that existed before 1887, the Adelong locomotive was then still at Adelong and the Narani and Hartley Vale locomotives were of 3ft 6in and metre gauge respectively. If Thorpe's version of Young's railway operations at Botany is correct, then the two Cobar Mort's Dock locomotives are the only known 'candidates' for the contractor's locomotive that was allegedly operated by Young.

Unfortunately available evidence does not appear to support Thorpe's version of events. The NSW Department of Mines Annual Report for 1885,[33] states that the Great Cobar rolling stock still consisted of 6 locomotives and 124 trucks. Although the sketchy nature of that report on the Great Cobar Mine compared to those of previous years, makes it possible that the report was cobbled together from previously held information, and that the Mort's Dock locomotive/s may have departed unnoticed, the complete absence of a mention of a locomotive in all material I have found relating to Young's work at Botany, suggests that Young in fact did not employ a locomotive although, he did utilise standard gauge track and more than likely originally planned to use a 2ft 6in gauge locomotive and tramway for spoil disposal.

Young may have even purchased a narrow gauge locomotive for that purpose, but so far no evidence of any type has emerged to show that Young actually operated a locomotive of any gauge at Botany, although this begs the question, just how did Young shift the large quantity of spoil from the trench he excavated in the river bed?. On 13 January 1886 *The Sydney Morning Herald* reported that : *For the construction of the syphon it had been necessary to erect a bridge over the river and to put down several tram lines.* [Were two separate, different gauge lines laid on the bridge, or were there dual gauge tracks?] *Amongst the machinery employed in laying down the syphon are two steam excavators and two steam pile engines, as well as a 20-horse power pumping engine and a Latham-Carey concrete mixer.* On 25 April 1888 the same paper advised that: the temporary bridge which was erected by the contractor [Young] was purchased by the Government. Notice the complete absence of a mention of a locomotive in both cases.

Despite extensive searching, the first mention of a loco-



The Mort's Dock locomotive at Botany, with a train of side-tipping wagons, circa late 1880s. Photo: Jim Longworth collection

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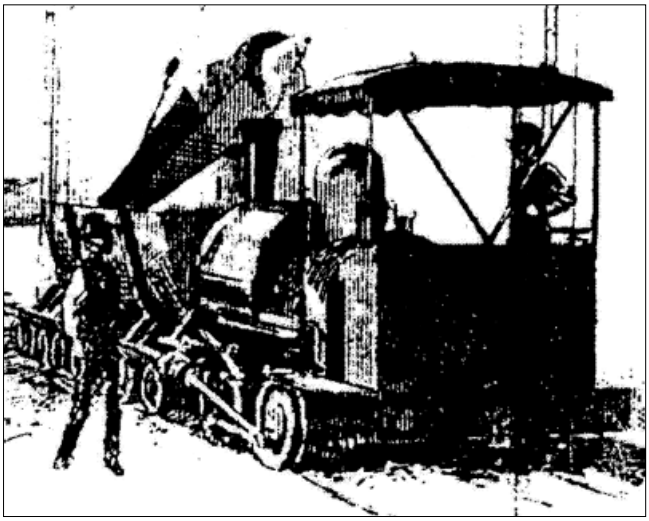

Mort's Dock locomotive at the Botany Sewage Farm. Engraving from Town & Country Journal, 12 May 1888

motive at Botany that I have found appears in an article on "The Sewage Farm at Botany" in the *Town & Country Journal* of 12 May 1888. As Mark Langdon has advised that the NSW Public Works Department placed an order with Mort's Dock & Engineering in May 1887 for the construction of a standard gauge locomotive for Botany, it appears certain that the locomotive referred to in May 1888 was in fact the one ordered the year before by the Public Works Department.

Two photographs taken at the syphon receiving station on the northern bank of the Cook's River both apparently in the latter part of the 1880's show a 0-4-0 locomotive upon which in one of the photographs according to Thorpe, a Mort's Dock and Engineering Co. builder's plate is clearly visible on the footplate rear sheet. This same locomotive appeared in an etching in the Town & Country Journal in May 1888. The details shown in the etching may suggest to some that the locomotive was converted from narrow gauge, but it appears more likely that the boiler and saddle tank were built to the same specifications as that of a 2ft 6in gauge locomotive, but the locomotive itself was built to standard gauge specifications.

Both photographs taken at the receiving station appear to have been taken after Young's contract had been completed. The locomotive portrayed appears identical in the photographs except that in the later photograph the locomotive clearly had a different and longer canopy, *(NB the absence of small scallops*). In the later photograph according to Thorpe, the initials "M.B.W.S.&S." can be discerned on the driver's hatband. If this is the case, it is apparent that both photographs were taken following the election of the "M.B.W.S.&S." in early 1888. It is believed that the locomotive ordered in May 1887 by the Public Works Department, continued operating at the Botany Sewage Farm until circa 1906 when it was then converted to a petrol driven "rail motor" car.

If as appears likely, the Cobar Mort's Dock locomotives and the PWD ordered locomotive were built from the same basic plan (excepting gauge), then the Cobar locos were 0-4-0 saddle tanks, but were otherwise similar in design to the locomotive built by Mort's Dock & Engineering for Boulton Molineaux's Perseverance Gold Mining Co. at Adelong.[34] Saddle tanks would have been consistent with the increased water needs at Cobar. The large 2ft 1in diameter wheels of the standard gauge Botany locomotive, considerably larger than those of the Adelong locomotive, would have been consistent with the longer distances and relatively flat ground that the Cobar locomotives operated over.

Postscript

If, as now seems likely, no second hand Mort's Dock locomotives worked at Botany, what happened to the Cobar Mort's Dock locomotives post Cobar? Also, what happened to the two Fowlers that didn't reach Cobar? Two 'unaccounted for' Fowlers, 4445 and 4448, (their dispatches scheduled for October & November 1882 respectively), may be the two "missing" Cobar locomotives in re-numbered guise. Fowler 4445 was apparently ordered by Henry Brooks & Co., 359 George St., Sydney and 70 Bishopsgate St. Within E.C. (UK), Wellington & Melbourne (39 Elizabeth St). Fowler 4448 was ordered by Parbury & Company. Significantly both locomotives were apparently bound for Australasian clients.

Regardless of the answers to these questions, it seems certain that photographs do exist of a Mort's Dock locomotive that was very similar in design to the Mort's Dock Great Cobar locomotives. Although the photographs show a locomotive that was considerably different below the frame, above the frame the locomotive was presumably pretty much as the Mort's Dock Great Cobar locomotives were at Cobar.

Acknowledgments

The generous assistance of John Browning, Jim Longworth and Mark Langdon and the following libraries, archives and museums and their staff is greatly appreciated: Charles Sturt University Library, Wagga Wagga; NSW Department of Mineral Resources Library, St Leonards; Mitchell Library, Sydney; Riverina Archives, Wagga Wagga; The Great Cobar Outback Heritage Centre.

Special thanks must go to Bob McKillop for his proactive editing of this article.

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"Uncle Jim's" Engine

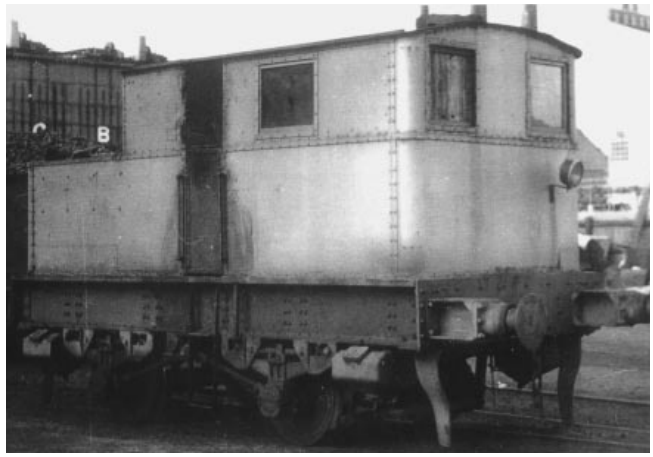
The Shunt Locomotive of the South Australian Gas Company

by Arnold Lockyer

Introduction

As a young lad living in Ascot Park on what was known as the South Suburban line of the South Australian Railways, I often travelled by train to West Croydon on the Port Adelaide and Outer Harbour Line to visit my paternal grandmother. During the run to West Croydon the trains passed the South Australian Gas Company's works at Brompton and you could see the series of tracks that ran through the complex. These tracks were at right angles to the gas works siding, which ran parallel to the main line. Coal was delivered to the works in rakes of 4-wheeled hopper cars (the SAR Z-class), which I used to call "gas works trucks". Along the siding, in line with each track into the works, was a small turntable that could accommodate one truck at a time. Once on the turntable, the truck could be turned through 90 degrees and then moved into the works.

One day I saw what appeared to be the back of a tank locomotive on one of the tracks inside the works. However, in spite of keeping a sharp lookout whenever I passed the works, I never saw it again. I had almost passed off my original sighting as wishful thinking when, in 1938, I joined the staff of the Factories and Steam Boilers Department, with access to the official records of all the non-government owned boilers in the State. It was then that I found that I had not been dreaming and that the SA Gas Company had owned a 5ft 3in gauge *Super Sentinel* locomotive, which had worked at Brompton from 1927 to 1931, when it was transferred to the Company's Osborne plant.



The Sentinel loco at the Osborne Works, fitted with a battery-powered headlight, shortly before its withdrawal and conversion to I/C power. *Photo: A.D. Lockyer*

I believe that the *Super Sentinel* locomotive would have been acquired by the company because of its short wheelbase, about the same as the SAR Z-class trucks, and would therefore have fitted onto the small turntables, previously mentioned, at Brompton.

The Sentinel locomotive shunts SAR Z-class hopper cars at the S.A. Gas Company's Osborne gas works circa 1940.
Photo: S.A.Gas Company, from A.D. Lockyer Collection.

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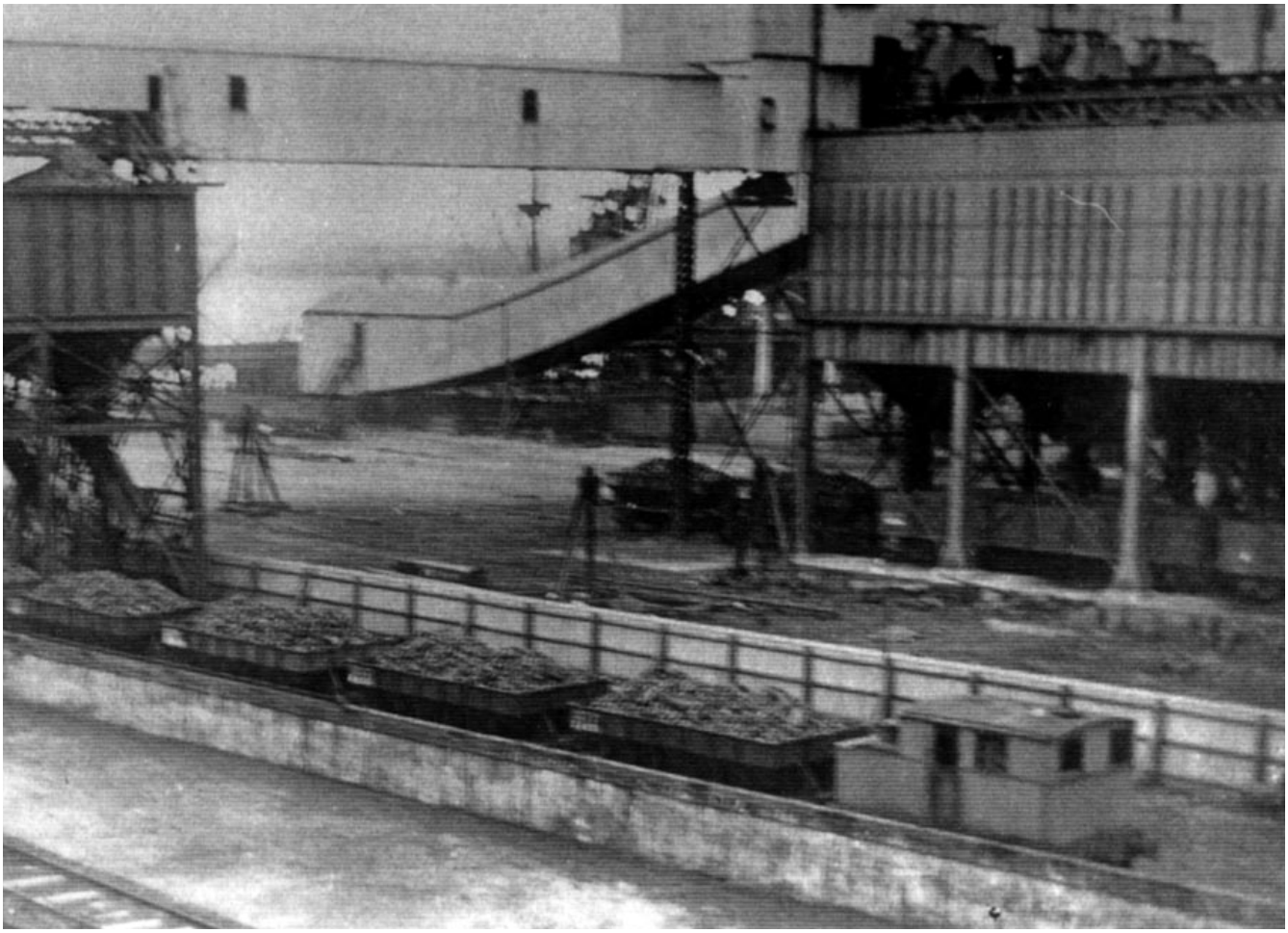


Another view of the Osborne gas works, showing the Sentinel loco in its original form. *Photo: R.T. Horne Collection*

History

Built by the Sentinel Wagon Works Limited, Shrewsbury, England with the maker's number 6638, the locomotive was registered as new in South Australia early in 1927.

As noted above, the loco originally worked at the Brompton gas works until it was transferred to the works at Osborne on 13 January 1931. It was withdrawn on 20 August 1947, probably because the boiler required replacement or major repairs.

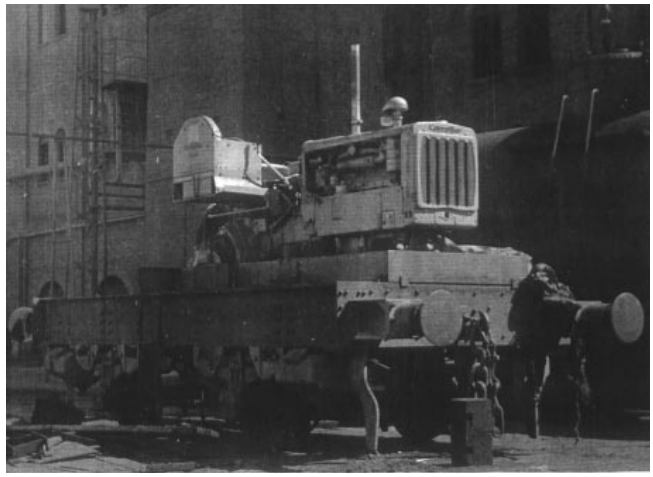
After its withdrawal, the cab, boiler and engine were removed and it was fitted with an internal-combustion engine and gear box. Returned to service in its new form on 4 October 1947, the loco remained in service until the closure of the Osborne works in 1980. It was then sold to the Paramount Machinery Company and was noted at that company's yard at Cavan in November 1981.

Following my original notes made in 1938, I was able to establish a closer personal relationship with this unique locomotive after World War II. The works manager at the Gas Company, the late Mr Jim Neal, was a close personal friend of my father-in-law. When I started to go out with my wife, who knew him as "Uncle Jim", he became my "Uncle Jim" too and the Sentinel locomotive is still remembered affectionately by me as "Uncle Jim's Engine". "Uncle Jim" was the source of much of the following information.

During World War II, the chain drive on the locomotive needed replacing. At the time it was not possible to get a replacement from England and a new drive was fabricated by one of the local manufacturers. In 1947, the chain drive was still relatively new and this was one of the main reasons that the Gas Company decided to rebuild the locomotive, using a Caterpillar engine and gear box connected to the chain drive.

The new power unit was perched on the Sentinel underframe and, when first returned to service, provided the driver with a seat but no protection from the elements. At this time, the original cab was sold to Mr Tom Weidenhoffer, Mr Jim Neal's son-in-law, who used it as a tool shed, while I was given the Sentinel maker's plates.

Once in service, it was realised that the gear box, whilst providing several speeds when going forward, had only one speed in reverse and that all the heavy work shunting the loaded coal trucks was done in the reverse direction.



The former Sentinel loco as rebuilt by the Company in 1947. At this stage, there was no protection for the driver - in wet weather, he had to wear a raincoat! *Photo: A.D. Lockyer*

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The rebuilt locomotive, now fitted with a rudimentary cab, runs around the baloon loop at Outer Harbour in 1949. An SAR guard (back to camera) supervises the operation, while some local children enjoy the ride. *Photo: Colin McLachlan*

To overcome this problem, the Company arranged with the South Australian Railways to turn the locomotive by running it around the balloon loop at Outer Harbor one quiet Sunday morning in 1949 when no suburban trains were operating. Fortunately, some Australian Railway Historical Society members who lived in the area heard about the unusual movement and were able to take photographs of the locomotive travelling around the loop, complete with SAR guard acting as pilot and several small children on board.

These photographs also show that some small effort had been made to protect the driver. The loco had by then been equipped with a roof, supported by four uprights, with what appears to be part of a wheat bag to act as a curtain beside the driver's seat.

With the closure of the Osborne plant in 1980, the locomotive was sold, as already mentioned, to the Paramount Machinery Company at Cavan. *Light Railway News 22* reported that it was advertised in the *Queensland Country Life Canelander* during March 1981, where it was described as a "Caterpillar Cane Hauler complete with final drive $5500 ONO". I was able to photograph it at Cavan on 5 November 1981. By this time, it had what could be loosely described as a partially enclosed cab. Although it was equipped with a standard SAR automatic coupling at the rear, it retained its buffers and English coupling hook at the front. It was then "for sale" with an asking price of $2000. As far as I have been able to ascertain, there were no takers and it was eventually cut up.

The loco in its final form, "For Sale" in Paramount Machinery Company's yard at Cavan, 5 November, 1981. *Photo: A.D. Lockyer*

In conclusion, it is mentioned that a similar locomotive operated on the Kerang-Koondrook Tramway in Victoria. Some years ago a replica was constructed and placed beside the old Koondrook railway station at the head of a small train of typical goods wagons that were used on the line.

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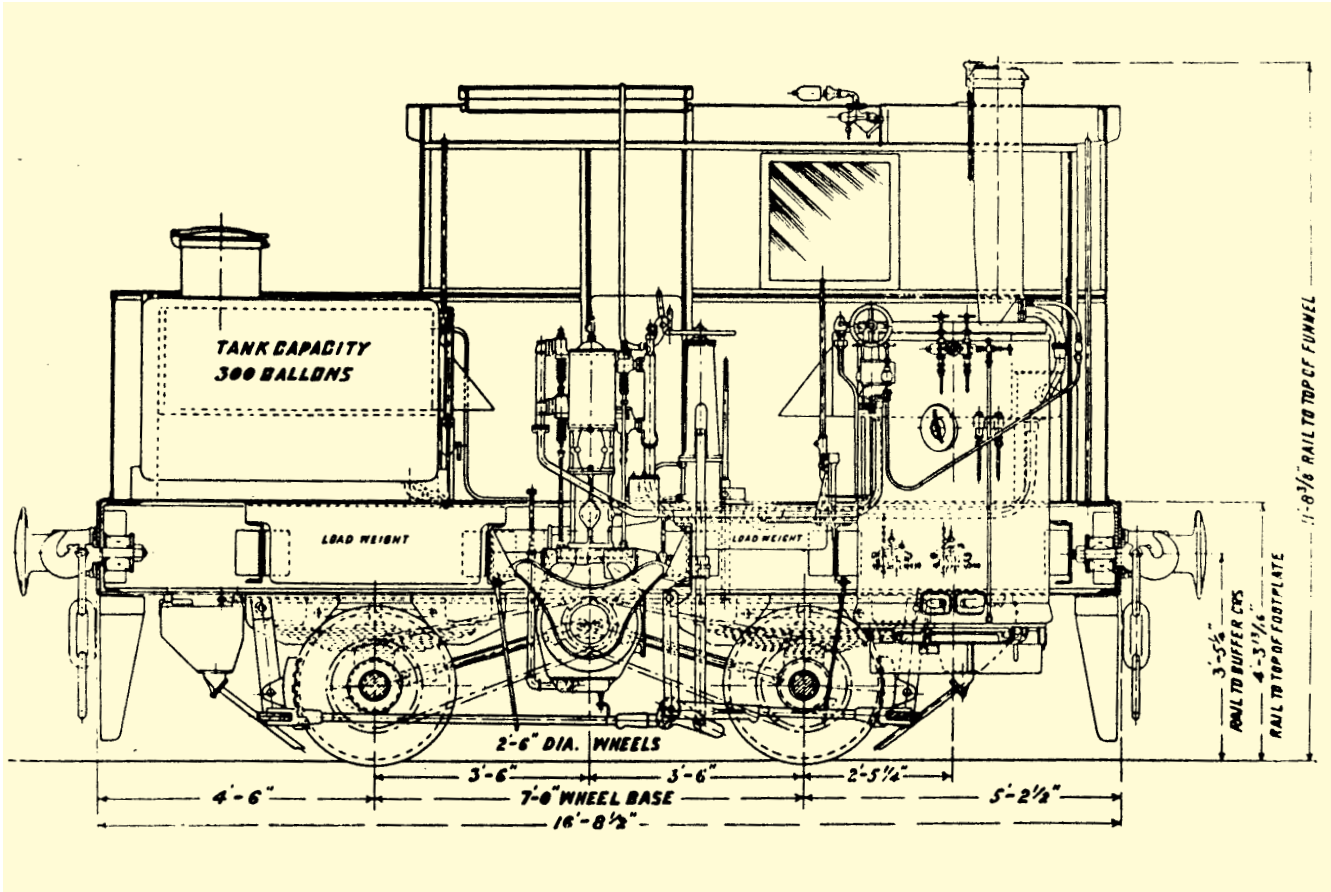

The Sentinel Patent Steam Locomotive

The *Sentinel* locomotive was developed using design elements from the famous *Super-Sentinel* steam waggon. Steam waggons were built by Alley & MacLellan Ltd, steam, marine, etc engineers of the Sentinel Engineering Works, Polmadie, Glasgow, from 1903.

In 1915, they set up a new factory in Shrewsbury, England, solely for their production and, in 1918, transferred ownership to The Sentinel Waggon Works Ltd, which shared their managing director with the old company. The *Super-Sentinel* steam waggon was introduced in 1923.

Sentinel locomtives were also first built in 1923 and came in a variety of sizes, power-ratings and gauges. The then Chief Engineer of the works, Mr J.P. Burnside, provided me with details of the *Sentinel* locomotives in June 1967, and the following description is primarily based on information from this source.

The South Australian Gas Company's 20-ton locomotive was typical of the standard designs of the period. The high-speed, vertical, twin-cylinder (6¾in.x 9in.) engine was mounted centrally between the water tank and the boiler (270 psi, and to the same design as used in the *Super-Sentinel* steam waggons).

The drive from crankshaft to axles was by roller chains. The axleboxes were held in place by radius rods (adjustable in length to allow for stretching and wear to the chains, there being no conventional hornblocks) and were fixed to leaf springs, the ends of which slid within large brackets rivetted to the side frames. The accompanying drawing and photographs amply show this arrangement.

Builder's plate from "Uncle Jim's Engine", B/N 6638 of 1926. Photo: A.D. Lockyer

Approximately 830 *Sentinel* locomotives and railcars were built, in the period 1923 to 1957. Apart from nine railcars built for the Tasmanian Government Railways between 1931 and 1937, and a single railcar each for the Commonwealth Railways and WAGR built in 1924 and 1926 respectively, the only other *Sentinel* locomotive used in Australia was B/N 7566 of 1928, new to the 5ft 3in. gauge Kerang & Koondrook Tramway in Victoria. Of 100HP, its engine dimensions were the same as that for the S.A. Gas Coy unit.

It was scrapped in 1941, at VR's Bendigo North Workshops, but its cab appears to have survived (doubtless, as with its South Australian sister, as a robust garden shed) and has been used in the replica locomotive that is now displayed at the former Koondrook station.

Many *Sentinel* steam waggons were used throughout Australia, and the S.A. Gas Company, itself, used two of them. In correspondence in 1967, the S.A. Gas Company's Chief Engineer advised me that their locomotive was purchased in mid-1925 (although Sentinel records show that it was not completed until December 1926) and cost £2,330.

Richard Horne

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Portland Cement

In the late 1960s and early 70s, as steam operation faded from the main lines of NSW, many Sydney enthusiasts began to discover the varied delights of the industrial railway scene. Photographers increasingly appeared along the track side at such diverse locations as the cane tramways of Ingham, Mackay and Bundaberg, the Richmond Vale and South Maitland Railways, the Electricity Commission line at Bunnerong, and, of course, the Portland Cement railway.

Portland is situated on the NSW Railways' Mudgee line, 180km west of Sydney, and its cement works was opened in 1883 by the Cullen Bullen Lime & Cement Co., who built a 3ft gauge horse-powered railway to connect the plant with what was then known as Cullen Siding, 1¼ miles away. Coal was brought to the works by way of a 2¼ mile branch line to Ivanhoe Colliery, which diverged near Cullen Siding.

In 1897, ownership of the works passed to the New Zealand Mines Trust Co. and three years later, the new owner floated the Commonwealth Portland Cement Co. Ltd, which took over the cement works, upgrading its facilities and considerably increasing its capacity. The new company also set out to improve its transport system by converting the narrow-gauge lines to standard. A new, standard-gauge, line from the works to Portland station, built partly on a different alignment, came into operation on 14 June 1901.

Over the years, the company purchased six standard-gauge locomotives, and leased several others at various times. At its peak, the system was a busy one and, following the opening of the standard-gauge line to Ivanhoe Colliery in 1911, an electric staff safeworking system, and associated signalling, was brought into use. By 1950, however, traffic had fallen to a level where the staff system was no longer required and, by the end of the decade, two locomotives had been withdrawn, and traffic on the Ivanhoe branch had ceased entirely.

In the late 1960s, three locomotives remained in service: No.3, a 41-ton 0-6-0T purchased new from Andrew Barclay (1234 of 1911); No.5, a 50-ton Andrew Barclay 0-6-0T (1470 of 1916) also purchased new; and 2605, a former NSW Government Railways 26 class 2-6-2ST, built by Dübs & Co (2794 of 1892), and purchased in December 1966.

This was quite a busy period for the railway, with two locos often in steam, but by the mid-70s, one locomotive making a few trips a day was all one could expect. In August 1982, the deteriorating condition of the steam locos led the Company to lease B-B DE locomotive D10 from Australian Iron & Steel, Port Kembla, but in any case, the railway shut its doors five months later and, after 99 years, the show was over.

Here we present just a few images from the cameras of three of us who made that pilgrimage to Portland. *Bruce Belbin*

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This page: *Troublesome trucks! No.5 looks on, Thomas-like, as its human colleagues discuss how best to deal with a delinquent Government S truck. May 1967. Photo: Robert Kingsford-Smith. No.3's crew, in their regulation hard-hats, peer out through the rear windows of the cab into the pouring rain as they bring their charge back to the works 'light engine', in June 1974. Photo: Bruce Belbin. In May 1967, CPC No.5 stands by the unique water column, waiting for its next assignment. Photo: Robert Kingsford-Smith.* ***Opposite:*** *No.5 and 2605 combine to lift a train of loaded bogie cement hoppers up the 1 in 38 grade from the works, in May 1967. The derelict Mackenzie and Holland lower quadrant signal is a sad reminder of more prosperous times. Photo: Robert Kingsford-Smith. On a cold, wet and windy day in June 1974, No.3 is almost enveloped in its own steam as it struggles to reach the summit of the grade with two loaded bogie hoppers in tow. Photo: Bruce Belbin. In December 1974, No.5 propels two loaded cement hoppers past the platform at Portland. The two signals at the left control the entry of CPC Co. trains to the Government yard. Photo: Graeme Belbin.*

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2nd INTERNATIONAL UNDERGROUND COAL MINING CONFERENCE

This three day conference will be held on 15-18 June in Sydney and will include a trade exhibition. For details contact Isabel Moreno on (02) 9736 1255 or imoreno@acirl.com.au
Australia's Mining Monthly 9/98 via Ray Graf

NEW SOUTH WALES

BHP LTD, Newcastle
(see LR 140 p.19)
1435mm gauge
As the Newcastle steelworks is due to close on 30 September 1999, now is the time to take advantage of the public tours, recently reinstated after a gap of more than 15 years. The two hour tours leave the new Tour Centre in Administration Drive at 9.30am and 1pm Mondays to Fridays. Bookings are essential on (02) 4940 2298. There is a small charge and visitors must come prepared in cotton trousers and solid enclosed footwear. The tours should provide participants with a good look at the rail system.
Rodbar 11-12/98 via David Jehan

TRANSFIELD BOUYGUES JOINT VENTURE, Sydney Airport Link Project
(see LR 145 p.21)
900mm gauge
The construction railway must have been completely removed from the tunnel between Tempe Reserve and the Domestic Terminal Station as a public underground walk-through was organised from Wolli Creek Interchange Station and the Domestic Terminal on Sunday 7 March in aid of the Paralympic Games and Clean Up Australia Day.
Transfield Bouygues Joint Venture 2/99

QUEENSLAND

BABINDA SUGAR LTD
BUNDABERG SUGAR LTD, Mourilyan Mill
(see LR 144 p.19 & 142 p.21)
610mm gauge

Wet weather interuptions at CSR Ltd's Victoria Mill during the course of the 1998 season speeded up a program of locomotive repaint jobs. Chris Hart captured a variety of locomotives around the mill on 15 September: ***Top:*** *Clyde 0-6-0DH CENTENARY (64-381 of 1964) in the mill yard near the traffic office.* ***Above:*** *The newly-named Motor Rail Simplex 4wDM THUNDERBOLT (11255 of 1964) awaits its next call of duty in the truckshop. The locomotive was first used at Harwood Mill in New South Wales.* ***Opposite:*** *E M Baldwin 0-6-0DH HOBART (4413-1-7-72 of 1972) and B-B DH DARWIN (6171-1-9-75 of 1975) stand outside the traffic office.*

Babinda Mill's Bundaberg Foundry B-B DH *Babinda* (002 of 1991) was transferred to Millaquin Mill during February. It is suggested that it will be replaced at Babinda by multiple-uniting a pair of 0-6-0DH locomotives expected to come from Mourilyan Mill.
Mourilyan Mill's unidentified Malcolm Moore 4wDM •5 was acquired, apparently late in 1998, by Andrew Forbes for the Kerrisdale Mountain Railway, Victoria.
With the cessation of sugar transport by rail to Mourilyan Harbour, the former Innisfail Tramway bogie sugar box wagons are believed to have become surplus to requirements at Mourilyan Mill. The HHB wagons had a 13-ton sugar box and were airbraked until 1977 when QGR ownership ended, and so are particularly attractive for possible future use as the basis for passenger cars. They were built in 1966-7. The other wagons had been converted from bogie bagged sugar wagons and were non-air fitted. The HH wagons also had the 13-ton sugar box, while the H class had an 8-ton box. Large numbers of these wagons, which are fitted with heavy-duty bogies, have been stored at the old Goondi Mill site, and some have been acquired by preservation groups. It was anticipated that late in February six of the larger wagons, numbered 2, 3, 8, 16, 31 and 38 would be removed for the Illawarra Light Railway Museum Society and the Bundaberg Steam Tramway Preservation Society. It is understood that at least six others remain, and may possibly be available for disposal. Enquiries should be directed to Mr Richard Rees on (07) 4043 8232.

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Andy Roberts 2/99; Editor

BINGERA SUGAR LTD

(see LR 145 p.21)

610mm gauge

It is reported that 0-6-0DH *MANOO* (E M Baldwin 3875-1-7-71 of 1971) will be transferred from Bingera Mill to Fairymead Mill for the 1999 season.

Andy Roberts 2/99; Scott Driver 2/99

CSR LTD, Herbert River mills

(see LR 144 p.19)

610mm gauge

Crushing for 1998 finished at **Macknade Mill** overnight on 27-28 November. **Victoria Mill** had finished almost a week before and Macknade was kept open to crush whatever cane came in. After being stopped for 5 or 6 days, Macknade fired up to crush the 5000 odd tonnes of cane which had accumulated over the previous three days' harvesting.

November saw some of the new Victoria Mill 11-tonne bogie bins used for cane transfer from Victoria to Macknade, and used out on the Macknade rail system. This had not been planned, but due to frequent stoppages of either one or the other mill at Victoria because of rain, there were loaded bogie bins requiring to be sent over to Macknade. The bins went through the Macknade feeding station and tippler successfully, but some modifications to the empty and full yard pushers will be necessary before the start of the 1999 season.

The rain also caused some Macknade cane to be crushed at Victoria as the mills took turns to crush the limited amount of cane that was able to be harvested. 364,000 tons of Victoria cane was crushed at Macknade and 63,000 tons of Macknade cane was crushed at Victoria. No raw sugar from Victoria Mill was hauled by Macknade Mill in 1998, as low sugar content in the cane reduced the output from the mill.

Victoria Mill's preserved Hudswell Clarke 0-6-0 *HOMEBUSH* (1067 of 1914) was used to give rides at the Victoria Mill Social Club Christmas party on 12 December. Macknade's Clyde 0-6-0DH 18 (DHI.5 of 1954) was loaned to Victoria Mill from 26 or 27 October to 6 November. E M Baldwin 0-4-0DH 17 (6-1446-1-9-65 of 1965) substituted for it at Macknade.

The new Victoria Mill $2.2m Elphinstone Creek road/rail bridge at Abergowrie was expected to be complete by the end of 1998, with work on the approaches and on the 6.4km of new cane railway to be done during 1999. Victoria Mill and local growers are contributing $1.5m for the rail line. The Herbert Shire Council and CSR Ltd have joined together to ask the State Government to fund a link between Hulbert's Road and West's Road at a projected cost of $4.5m. This new line would link the present terminus of the Macknade Mill Hawkins Creek line with the terminus of the new Elphinstone line. The link would not only remove the need for Abergowrie cane to cross the Herbert River, it would also reduce cane traffic across the highway in the centre of Ingham, and probably eliminate the need for cane transfers from Victoria Mill to Macknade Mill.

Other cane railway projects for which government funding has been requested include a rail extension to the Orient ($1.5m), Midway Creek bridge and rail extension, Abergowrie ($1.4m), and Elphinstone Pocket Road rail extension and bridge ($0.5m). In the absence of government funding, the Hinchinbrook Shire Council was planning to replace the collapsed Midway Creek road bridge with a $0.24m culvert project for road access only. The loop that was supposed to be built on the Macknade Mill line between Macknade School Road and the Western

STOP PRESS

It is believed that a film of steam on the 2ft gauge cane railways of Queensland will be made during 1999. Tentatively entitled "Bundy's Last Great Adventure" it will feature the Australian Narrow Gauge Railway Museum Society's Bundaberg Foundry 0-6-2T 5 of 1952 at work on a variety of cane railways right up the Queensland coast. Filming is likely to take a month and will probably coincide with the start of the season, making June a likely start time. The film will be made as a documentary for television by Gulliver Media Australia Pty Ltd with the co-operation of ANGRMS and the sugar industry.

Archival film is being sought to enhance the story. Gulliver wishes to purchase the rights to use film of steam at work in the canefields, the earlier the better. Home movie standard will be fine, and modern day technology means that even damaged or poorly-preserved film can be used.

Contact Larry Zetlin (07) 3367 0899.

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Industrial Railway NEWS

line junction during the crushing was not constructed, although the points are still in the main line. The Victoria Mill bridge over the Stone River at Beeva as well as some bridges on the Stone River line are being upgraded in the current slack to take the rebuilt ex-govt railways Walkers B-B DH locomotives.
Macknade Mill has purchased the E M Baldwin wheelsets and final drives recently advertised in *Light Railways* by the Illawarra Light Railway Museum Society.
Herbert River Express 8/12/98, 24/12/98 & 7/1/99 via Chris Hart; Chris Hart 12/98 & 1/99

HAUGHTON SUGAR CO PTY LTD, Invicta Mill, Giru
(see LR 144 p.20)
610mm gauge
State Government funding has been made available to investigate improvements to the tramway crossing of the Haughton River near Giru in an attempt to ease flooding.
Australian Canegrower 7/12/98 via Chris Hart

MILLAQUIN SUGAR CO PTY LTD, Bundaberg
(see LR 145 p.21)
610mm gauge
Babinda Mill's B-B DH *Babinda* (002 of 1991) arrived at Millaquin Mill in February. It has been transferred here in order to service a new line some kilometres long extending across the Elliott River from Dr May's line at the southern part of the Millaquin system. There is some suggestion that this locomotive may be renamed *ELLIOTT* (although no Millaquin locomotives are currently named.). Bingera Mill's 0-6-0DH *ST KILDA* (Ruston & Hornsby rebuilt E M Baldwin 6-1279-1-6-67 of 1967) was at Millaquin during February for use by the navvies. Scott Driver 2/99

MINE & QUARRY EQUIPMENT PTY LTD, Wacol
(see LR 145 p.22)
narrow gauge
Further information has been obtained about the unidentified Clayton and Wingrove & Rogers battery electric locomotives imported from England. The Clayton 4wBE fitted with motor SCB 110/4 was one of builder's numbers 5554/1, 5554/2 and 5554/3 of 1968. These were delivered new to Camborne Tin Ltd, Pendarves Mine, Cornwall. It is believed that the locomotive in Queensland is 5554/3, as the other two remained at Pendarves Mine after this loco was disposed of to Wheal Jane at Truro in 1987 (and is later believed to have found its way to South Crofty mine in 1991). The Clayton 4wBE fitted with motor CEC 466/4 was one of builder's numbers BO163A and BO163B of 1974, both new to Geevor Tin Mines, Pendeen, Cornwall, and going to Pendarves Mine about 1979. These went direct to South Crofty in 1987. It is impossible to determine which of these two is the one in Queensland.
The Wingrove & Rogers 4wBE carrying number 5 is E6907 of 1965, delivered new to Mitchell Brothers Sons Co Ltd, London NW1 and later finding its way to Weardale. It should be marked MBS248 in weld. The other unidentified Wingrove & Rogers is likely to be 5299 of 1955, delivered new to J Woodrow, Bridge of Weir, Scotland and again coming to the Weardale mining industry second-hand.
Bob Darvill & Dave Holroyde (Industrial Railway Society, UK) 2/99

TASMANIA

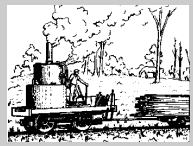
MT LYELL MINING CO
(see LRN 108 p.18)
The mining company (formerly Gold Mines of Australia) and its wholly-owned subsidiary, Copper Mines of Tasmania, was placed in administration on 8 December 1998. It is not clear if underground rail operations are still a feature of the mine. Perhaps a reader could provide an update on this.
The Sydney Morning Herald 9/12/98 via Ray Graf

VICTORIA

JIM PURTON c/- A F Butler, Lalor Street, Ballarat
(see LRN 105 p.21)
762mm gauge
A visit on 30 December 1998 revealed that the six locomotives stored here have been moved since the last report four years ago because of new building work on site. Identities carried are as follows:

011	327 7011	4wDH	Gemco Funkey
014		4wDH	Gemco Funkey
027	DZIDRA	4wDH	E M Baldwin
029	MARGARET	4wDH	E M Baldwin
		4wDH	E M Baldwin 5366.5.74
033	TANNA	4wDH	E M Baldwin

Ray Graf 2/99



LRRSA NEWS

MEETINGS

ADELAIDE: "Show and Tell"
Members are requested to bring a favourite photograph or slide, and tell the story behind it.
Location: 150 First Avenue, Royston Park.
Date: Thursday 8 April at 8.00 pm. Contact Arnold Lockyer (08) 8296 9488.

BRISBANE: "Sugar"
Members are invited to bring slides and other items on the subject which may be of interest.
Location: 54 Aberdare Street, Darra.
Date: Saturday 17 April at 7.30 pm. Contact Bob Dow (07) 3375 1475

MELBOURNE: Walhalla Goldfields Rwy
Robert Ashworth will give a talk on the Walhalla Goldfields Railway, which has now been in operation for five years, including a video of its reconstruction.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday, 8 April at 8.00 pm.

SYDNEY: Canadian Logging Railways
Ray Gardiner will give a talk on Canadian logging operations.
Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).
Date: Wednesday 28 April at 7.30 pm. Contact Jeff Moonie (02) 4753 6302.

Mourilyan Mill's unidentified 610mm gauge Malcolm Moore 4wDM •5 at Goondi Mill site during 1998, shortly before its acquisition by Andrew Forbes. The original Malcolm Moore cab supports have had some additional side bracing added by the mill. Photo: courtesy Andrew Forbes

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PHOTO FEATURE

Western Australian Timber Mill Diesels

Part One

Following the demise of the timber tramways described in the Society's recent publication, *Rails to the Bush*, a number of mills still required 3ft 6in gauge locomotives to shunt the mill sidings or haul timber products from the mill to the main line railway junction.

Some mills retained a steam locomotive for such duties, but others obtained a diesel locomotive. These were typically second hand industrial units which tended to last into the 1980s as the consignment of timber products by rail ceased.

Thanks to Len Purcell, Simon Mead and Kieran Wright for information and photographs. This feature is only Part 1. Part 2 will be able to appear when contributors are able to come up with photographs of and information on the Malcolm Moore unit at Nannup (and maybe the Malcolm Moore Fordson petrol loco at Welshpool) and also the tiny Ruston & Hornsby diesels which reportedly were used by Millars and Bunnings, not to mention other less well-known units.

John Browning

Clockwise, from top: *Modern-day industrial railway service by the Pemberton Tramway Company. Ex-Westrail British Thomson-Houston Bo-Bo DE Y1115 (1025 of1955) at Pemberton propels down to Bunnings Pemberton Mill to clear some empty wagons, 2 October 1998. Photo: Kieran Wright.* ❑ *Commonwealth Engineering 0-6-0DH BB1050 of 1961 was used by Bunnings (formerly Hawker Siddeley Building Supplies) at Pemberton and is now owned by the Pemberton Tramway Company. This locomotive was originally built for M R Hornibrook Pty Ltd for use on the Townsville - Mt Isa Railway rehabilitation project in Queensland and came to Western Australia in 1969. Photograph taken at Pemberton 27 September 1998. Photo: Kieran Wright.* ❑ *Clyde 0-6-0DH 61-241 of 1961 was used by Millars (WA) Pty Ltd at Yarloop for hauling WAGR wagons between the railway yard and the sawmilling complex, a distance of approximately 1.5 km. The Model HG-3R 300hp locomotive was originally built for Broken Hill Associated Smelters Pty Ltd, Port Pirie, SA and is now preserved at the Historic Mill Workshops. This photograph was taken at Yarloop in 1980. Photo: Len Purcell Collection.* ❑ *Low-slung Plymouth 4wDH 6129 of 1958 shows its tunnelling origins at Pemberton on 2 October 1998. It was used by Bunnings at Manjimup before being acquired by the Pemberton Tramway Company in 1996. It was originally a 2ft 6in gauge locomotive built for Utah Australia Ltd for use on a Snowy Mountains Scheme tunnelling project in New South Wales and was regauged to 3ft 6in by Utah for a second project before disposal in about 1961. Photo: Kieran Wright.* ❑ *A contrast to the filthy state in which it appeared in LR 139, the JFK Engineering 4wDH (built 1972) has been turned out in impressive (if non-authenic) style at Boyanup Museum as BM002 JARDEE, 2 October 1998. This locomotive was built in Perth for the Millars (later Bunnings) Mill at Jardee. Photo: Kieran Wright.*

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Book Reviews

The Era of the Bush Tram in New Zealand

by Paul Mahoney

192 pages. A4 size. Hard cover; 12 colour and 181 black and white photographs, 2 colour reproductions of paintings, 2 line drawings, 2 loco diagrams all printed on 128 gsm matt art paper. Published 1998 by IPL Books, PO Box 10-215, Wellington, NZ; recommended price $NZ59.95.

Over the period from the 1850s to the 1970s, New Zealand boasted over 500 bush trams, nearly all 3ft 6ins gauge, with the majority using horse haulage. However, many did feature locomotives, an estimated 420 units in all, of which slightly more than half were steam, and there was a bewildering variety of types, both imported and New Zealand made. The lines seem to have been distributed all over the country with just about every conceivable engineering feature including spectacular inclines and massive timber bridges.

Locomotive haulage was used not just on light steel railed tramways but also on timber rails, necessitating some ingenious articulated designs, including 16-wheel steam locomotives which must have had to be seen to be believed.

The challenge facing the author of a book intended to provide an introductory treatment of such an enormous topic is a major one. The approach chosen has been to divide the book into three parts, the first providing a general introduction to bush tramways and their operation, the second dealing with steam locomotives, and the third with internal combustion machines. The book is profusely illustrated with a magnificent range of well reproduced photographs. The technique of extended photo captions is well used to provide many insights into the author's subject, with the high quality of presentation giving the book somewhat of a LRRSA "feel" to it.

The first section of the book deals quite nicely with a broad treatment of bush tram operations, including social aspects, and shows how the political and legislative framework affected the development of rail transport in the forests. However, it does not say much about the development of the timber industry in geographical terms, nor about the processing and eventual use of the timber product.

The locomotive story commences as early as 1870, and the relevant sections are packed with information, and yet remain hard pressed merely to give a summary of the main types of locomotives and their development, with particular emphasis on the fascinating articulated steam locomotives, both American and local, and the story of the resourceful development of the various types of locally-produced rail tractors.

Concentration on these aspects of the history has meant that other aspects receive little attention. There are no maps in the book, and to anyone unfamiliar with New Zealand geography and economic development, it is difficult to get a grasp of where the main centres for bush tram development were situated. It is understandable that there is no comprehensive attempt made to provide descriptions of the various bush tramways, but this means that the utilisation (and usefulness) of various types of locomotives is not related to the specific operating conditions encountered on individual lines.

There are some very useful listings of large numbers of known locomotives. The amount of detail supplied does not follow a consistent pattern, although the listings do form a very valuable resource.The book does not have an index. Neither it is fully referenced, but it does contain a useful general bibliography.

Fully-referenced copies of the manuscript have been deposited in the Alexander Turnbull Library, Wellington. More than 300 oral interviews are a major part of the research base used by the author, who works for the New Zealand Department of Conservation and is involved in the identification and preservation of significant timber industry sites.

Some aspects I found annoying included the author's insistence on referring to bush tramway locomotives throughout as "lokeys", apparently a vernacular term in New Zealand. Although mercifully free of typographical problems, there are a number of areas where tighter editing may have been valuable. For example, there appears to be a confusion about whether the locomotives developed by Frank Trail and built by A & T Burt should be known as "Trail tractors", "Trail's tractors" or "Trails tractors".

Another case in point is the various references to the use of powered trailing bogies in internal-combustion and steam applications, where a powered bogie driven by a long driveshaft, universal joints and gears served as the first log bogie in a train. The author says that this was an innovation of Frank Trail, with the first example of his rail tractor built in 1924, although he elsewhere says that the first Nattrass tractor, built in 1923, incorporated this feature. Furthermore, a description of the 1927 and 1929 McGregor geared steam locomotives says that this design was "the first use of powered log bogies and may well have been the concept copied for the Trails tractor." Another concern was some discrepancies I noted in details such as dates and wheel arrangements as found in the text, in photographs, and in the loco listings appearing as an appendix.

In spite of such reservations, I still found the book a delight, with the descriptions and photographs of a wide variety of geared and articulated steam locomotives a particular highlight, and the author is to be congratulated on a wonderful achievement. This book should be very popular among those who have purchased copies of the Society's timber tramway books. Highly Recommended.

John Browning

Brand new class B Climax 898 hauling logs at Ganmain's Mill, Ohakune, New Zealand, in 1909. Photo: A.P. Godber Collection, Alexander Turmbull Library, Wellington.

Tasmania's Hagans

The North east Dundas Tramway Articulated "J" Class

By Geoff Murdoch.

Published by the author. 71 pages, A4 size, 42 photographs, 2 maps, 38 diagrams and drawings. Available from LRRSA Sales, $20.00 ($18.00 for members), plus postage.

With 1 in 25 grades, numerous 30 metre radius reverse curves, narrow cuttings, rails which were usually wet and slippery, and the need to carry large tonnages of ore, the North-east Dundas Tramway presented a huge challenge to

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locomotive designers. Combined with these problems was a restriction on maximum axle loading due to the 46 lb/yd rails.

Originally two Sharp Stewart 0-4-2Ts were obtained to work the line. These were the G class, and whilst relatively big for 2 ft gauge locomotives at the time, they proved unable to handle the large tonnages. The Tasmanian Government Railways therefore sought something larger. They chose a mechanically articulated 2-6-4-0T locomotive, built by the Hagans locomotive factory, in Erfurt, Germany. The TGR classified this the J class.

Whilst it is not known what alternatives the TGR considered, this design had the advantage over Meyer, Mallet and Fairlie articulateds in that only one set of cylinders was required, and the inefficiencies caused by flexible steam joints were avoided. It also had the advantage over geared designs, like the Shay, in having a much higher maximum speed.

The resulting locomotive (which was the only Hagans Patent locomotive built to the 2-6-4-0T wheel arrangement) had a maximum rigid wheelbase slightly shorter than the G class, and a maximum axle loading half-a-ton lighter than the G. This was quite an achievement in a loco which was more than twice the overall weight of the G. At the time of its construction it was believed to be the biggest 2 ft gauge loco in the world.

The most unusual feature of the Hagans Patent was the mechanical linkage which transferred the power to the rear set of drivers. This was ingenious and quite complex. It is also difficult to explain, but with the aid of excellent diagrams and good descriptive text the author has succeeded in this book.

The locomotive also had many other unusual features, such as the method of transferring the weight of the loco to the rear set of drivers. These features are illustrated with beautifully drawn diagrams, many by the author, and others from Hagans.

It is well known that the North-east Dundas Tramway became the first railway to use the Beyer-Garratt type of articulated loco, with the delivery of K class Nos 1 and 2 in 1910. These locos were preferred to the J because they were more flexible and coped with sharp curves and light track better. But like the J, they were of a unique "one-off" design, and had their own problems.

A problem with many articulated locomotives designed to run on light track is that faults in the track affect the frames of the locomotive. This happened to the Victorian Railways G class garratts, and appears to have been a problem with the TGR's K class garratts, which became prone to frequent derailments due to twisted frames. The Hagans had an extremely robust frame which was designed to withstand these stresses. Again the book describes and illustrates this feature very well.

It has sometimes been claimed the J class was a "white elephant", being too heavy for the track, and that it was relegated to shunting, and working the Comstock and Smelter branches rather than the North-east Dundas Tramway. The author presents some fairly convincing evidence that this was not the case, but unfortunately does not give precise references to his supporting evidence.

The evidence is in correspondence between the District Station Master at Zeehan and the TGR Traffic Manager in Hobart, which is available in the Tasmanian State Archives, Murray Street, Hobart, but living in Brisbane the author did not have direct access to this.

This is unfortunate, because from information subsequently obtained, it appears that the J class was the only locomotive capable of working the North-east Dundas line in the late 1920s, and when its boiler failed in 1928 it precipitated the closure of the line.

The author also points out that in 1909 the TGR purchased a spare boiler from Hagans for the J class, and they would not have done this if they considered it a white elephant. Unfortunately, by 1928 when it was needed, it was in use at Launceston workshops as a stationary boiler to provide steam.

As well as describing and illustrating the J class, this book presents a brief history of the Hagans locomotive factory, other Hagans patent locomotives, and describes and illustrates many of

Book Reviews

A selection of LRRSA timber tramway books . . .

Arsenic and Molasses

A Pictorial History of the Powelltown Tramway and Timber Milling Operations - by Frank Stamford

A companion volume to the LRRSA's book *Powelltown*, but with an emphasis on photographs, with brief introductory text for each of the eleven chapters, and extended captions. All the photographs are different to those in *Powelltown*.

88 pages, A4 size, over 100 photographs, 8 maps and diagrams, glossary and index.

Price: Hard cover $33.00 plus postage. Weight 650 gm. Soft cover $22.00 plus postage. Weight 470 gm.

Bellbrakes, Bullocks and Bushmen

A Sawmilling and Tramway History of Gembrook 1885-1985 - by Mike McCarthy

Describes a network of 3 ft and 3 ft 6 in gauge timber tramways. The construction and operation of these lines is covered in detail, as is the history of the timber mills, and the people who worked in the bush.

104 pages, A4 size, 71 photographs, 17 maps and diagrams, references and index.

Price: Soft cover $24.00 plus postage. Weight 500 gm.

Rails to Rubicon

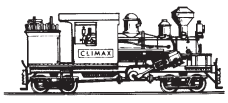
A History of the Rubicon Forest - by Peter Evans

A history of a network of 3 ft and 3 ft 6 in gauge timber tramways in the rugged mountainous terrain south-east of Alexandra. The 2 ft gauge Alexandra-Rubicon steam tramway, and the 2 ft gauge State Electricity Commission tramways are also covered.

200 pages, A4 size, over 175 photographs, 53 maps and diagrams, references and index.

Price: Hard cover $34.00 plus postage. Weight 1 kg.

Postage and packing: Within Australia, up to 500 gm: $4.20; 501 gm to 3 kg $8.30 .



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the features of the North-east Dundas Tramway. It also includes scale drawings of the G, H, J and K class locos used on the Tramway. The photographs are as well reproduced as one could expect, considering variable quality of the originals.

There are a few faults in the presentation in this book, but its overall appearance is most attractive. Unfortunately the reference list, while extensive, lacks sufficient detail to make it easy to seek out some of the sources referred to. The author has consulted a wide range of sources, including descendants of the locomotive's designer, and other sources in Germany.

Tasmania's Hagans is a valuable addition to Australia's railway history, and the result of much careful work. For anyone contemplating making a model of the J class this book is essential. Highly recommended.

Frank Stamford

Five Decades of Clyde-GM Locomotives

by Lawrie Gillies

40 pages, A4 size. Card full cover, 24 colour and 20 B&W photographs, two pages of drawings. Published 1998 by the Australian Railway Historical Society, NSW Division; RRP $14.95

Although the majority of Clyde Engineering's locomotive production is beyond the scope of the LRRSA, there is enough light railway content in this book to make it of interest to many of our members. Unfortunately, its value is diminished by errors and omissions.

The book begins with a brief introductory article giving some background notes on the history of Clyde Engineering, followed by a feature article reviewing Clyde's diesel locomotive production. This is based on a talk the author gave to the ARHS NSW Division in 1991, reminiscing on his experiences with diesels in New South Wales. Two appendices give a complete list of the diesel and electric locomotives built or supplied by Clyde between 1951 and 1998.

Distributed throughout are photographs which provide a good cross section of Clyde's diesel production over the years, including several of light railway interest. Most of the photos are well produced through a couple lack sharpness. For most purchasers, the builders lists in the appendices would be the book's main value, but it is here that most problems arise, particularly with regard to the ownership of the locos. A reader unfamiliar with the sugar mills of Queensland would be led to believe that every sugar mill that bought locomotives from Clyde is the property of CSR Ltd, as they are listed as the owners in every case.

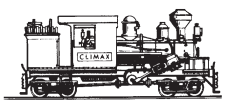
There is also confusion concerning the names of various government railways. Where locos have been sold to new owners, the change of ownership has been included on the list, but there are quite a few omissions, the sale of the Townsville Harbour Board's ST5 to the Queensland Railways in 1988 and V/Line's Y148 to BHP at Long Island being two such instances. In the years since 1951, when the first Clyde diesel rolled out of the Granville plant, the company has, at different times, built locomotives in several factories located in various parts of Australia. I would have liked to have seen an indication as to which plants produced which locos. This could easily have been included in either the list or the text. A couple of the plants are referred to briefly in the text, but others, such as Eagle Farm where some of the sugar tramway locomotives were built, receive no mention at all.

No indication is given of the gauge of the locomotives, and although in most cases this is fairly obvious because of the railway they were built for, it is not easy to ascertain the gauge of some that were built for industrial users. An explanation of the model codes would also have been useful to many readers.

While many enthusiasts will be able to use their own knowledge to compensate for these shortcomings, a bit more research would have resulted in a much better book.

Darryl Grant

Book Reviews



Light Railways ... Back numbers

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The following issues are not currently available: LR 1 to 17, 20 to 22, 29 to 47, 49, 53, 54, 60, 67, 79, 82, 86, 90, 91, 94, and 121.

Postage and packing is extra. Within Australia post and packing is $1.85 for weights up to 125 gm, $3.30 for 126 gm to 250 gm, $4.20 for 251 to 500 gm, and $8.30 for 501 gm to 3 kg. **Weight:** Prior to issue No.139 - 65 gm, issue No.139 and later - 160 gm.

Major articles in some selected issues are listed below. Articles marked with an asterisk take up the whole magazine.

LR 61 Munro's Logging Tramways, Hampton (Qld) *
LR 89 Nepean Sand - Railways of Yarramundi Falls (NSW) *
LR 105 North Mt Lyell Railway (Tas) Part 1
LR 106 North Mt Lyell Railway (Tas) Part 2
LR 109 North Mt Lyell Railway (Tas) Part 3
LR 111 Cave Hill - Lilydale Tramway (Vic)
LR 113 Simsville and the Jarrah Mill (NSW) *
LR 120 Fyansford Cement Works Railway (Vic)
LR 124 Goodwood Timber Co. Port Albert (Vic) *
LR 131 Longworth Log Tramways Kendall (NSW)

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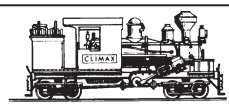

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LETTERS

Dear Sir,

Gembrook Gala Day (LR 144)

I was delighted to receive a copy of the December 1998 publication of *Light Railways.*

While I am not sure that the photograph of me on page 2 was particularly flattering, I was very pleased to have participated in the Gembrook Gala Day. It is events such as these, and publications such as yours, that go a long way to preserving Australia's railway history. It is a history that has been significant in the development of Australia, and in particular the prosperity of this country has depended on the efficiency of our railway networks.

Best wishes to you and the team behind *Light Railways* for the future.

Tim Fischer MP
Parliament House, Canberra ACT

Dear Sir,

An Aveling & Porter Locomotive at Charters Towers

John Kerr told me that when he was researching the history of Proserpine Mill, he found in the Brisbane files of CSR a letter from C. Walker of Mosman Street, Charters Towers of 30 October 1900 to the Brisbane manager of CSR:

I have for sale a locomotive and tender combined which I think may be of use to you....One Aveling & Porter 10 ton loaded locomotive, gear driven, cylinder eight and a half inches, steam pressure 120 pounds. Three tanks, one underneath and two side. Can draw 90 tons on the level, wood burning, tender and locomotive on one frame. Fitted for two foot eight and half inch gauge, but can be increased to any size up to 3 foot six inches without any extra cost. Guaranteed nearly new and in perfect order and condition. Price £375 nett free on rail Charters Towers....The locomotive came to the Towers and has never been used here, in fact, it is still at the railway station where it can be inspected and examined.

CSR declined the offer.

The Charters Towers Water Board had a 2 ft 8½ in. gauge tramway from its pumping station on the Burdekin River, outside the town, across the river on its north side, for firewood. The odd gauge in Imperial measure is a reasonably round figure of 825 mm in metric. From 1889, when the station opened, until 1901, the tramway was worked by horses (which makes the choice of gauge even more unusual). From 1901, it was operated by an Orenstein and Koppel 0-4-0T, B/N 819 of 1901, until the line closed in 1937-8.

So far as is known, other private railways in and near Charters Towers were 3ft 6in gauge. It would seem that this locomotive was obtained by, or for, the Water Board, but declined.

Aveling & Porter locomotives were like traction engines on rails, with cylinders above the boiler, driving the rear wheels through gearing, or four wheels through chains. Locomotives were a relatively minor part of the output of the firm.

The very incomplete list of Aveling & Porter locomotives held by the Stephenson Locomotive Society gives no hints about this machine. Nor does the trade literature of the firm held in libraries. While saying that the various locomotives on offer could be supplied to gauges from three feet upwards, it says nothing about convertibility of gauge of locomotives once built. The largest machine offered at the turn of the century was of 9¾ tons.

Does any reader know what this machine was and what became of it?

John Knowles
New Malden, UK

Dear Sir,

Aveling & Porter Locomotive

The following item, which appeared on page 132 of the *Australian Ironmonger, Builder, Engineer & Metal Worker,* Vol.1 No.6, 1 Sept 1886, may be of interest:

National Agricultural Society of Victoria - Annual Show

D. Munro & Co., Melbourne, had an extensive show of engines, threshers, pumps, etc...A novel feature of this exhibit was a locomotive, by Aveling & Porter, suitable for light railways. The gauge is 3ft, but the wheels may be adjusted to other gauges; it has two speeds, viz three and six miles per hour.

Colin Harvey
Reservoir, Vic

Dear Sir,

Melior's Meadowbank Manufacturing Company Tramway (LR 143)

I should like to add the following information regarding this company:

The earliest dealings with the NSW Govt Railways I have found was a tender for 100 'D' trucks submitted on 18 December 1900. The first successful tender was contract No. 5/01, when "John Howard trading as Meadowbank Manufacturing Company" gained the deal to build thirty brake vans.

The last contract that I am aware of was for a pair of six-wheel bogies, let on 1 February 1929. They continued to submit tenders; the last that I have found was submitted on 4 March 1938 for fifteen 'BS' first class steel-bodied passenger cars.

Incidentally, other work included some 'American cars' for the South Maitland Railway, and trams for both Sydney and Brisbane.

Don Estell
Wollongong, NSW

Dear Sir,

John Fowler 0-6-0T 5265/1885 ex-Kiama Council (LRN 26, February 1982)

Recent conversations and correspondence with various researchers have led me to believe that the departure of the John Fowler 0-6-0T 3ft 6in gauge locomotive from Kiama Shire Council and its fate may not have been fully documented.

The following information from the *Sydney Morning Herald* of 26 June 1890 (p.5) should help rectify that situation:

Kiama, Wednesday 25 June 1890:

Mr JW Jaffray of Jaffray and Co., George St. Sydney, who have been treating with the Kiama Municipal Council for the purchase of the corporation locomotive, had an interview with the Mayor to-day [sic], and concluded the purchase at a cost of £475. The engine is to be dismantled in a few days and sent to the railway station, North Kiama, whence it will be taken by Darling Harbour and shipped for Rockhampton, to be used on a Queensland railway contract.

This information may be of interest to readers, and particularly members of the Van Diemen Light Railway Society who are restoring the locomotive at Don River in northern Tasmania.

Ron Madden
Wagga Wagga, NSW

Dear Sir

***LILY, MONA,* and *KOUMALA* (LR 108, 124, 126, 133)**

In LR 108, David Mewes told the story of the "Koppel" locomotive on the Neranwood timber tramway in Queensland and how, as *KOUMALA* on the Plane Creek sugar mill tramway, it was later identified as a Krauss.

He mentioned a suggestion that this locomotive might be Orenstein & Koppel 3771 of 1909. The suggestion was mine, and now is the time for me to repent of it and hopefully to provide some more accurate information about this locomotive's identity.

The publication *Rails to the Bush*, by Adrian Gunzburg and Jeff Austin, provides evidence that O&K 3771 was a locomotive named *LILY*, of which two very nice photographs appear in the book. This locomotive was used by The Kalgoorlie and Boulder Firewood Company on its tramway at Beria, WA. This locomotive had arrived at Beria in 1909 but seems to have disappeared from there because, following the line's closure in 1924, it was neither recorded as sold nor was it abandoned on site. It is true that its boiler appears very similar to that carried by "the Koppel" at Neranwood as seen in LR 108, but there the resemblance ends.

I had always been very intrigued by the link in ownership between the Beria firewood line and the Goodwood Timber & Tramway Co, especially because I was aware of a reference in George Bond's files. This was an anecdotal statement recorded by Charles Small that a locomotive had been transferred from Beria to Goodwood and shortly afterwards had blown up.

Whether this may possibly be an accurate

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account about *MONA*, I doubt. Certainly correspondence with Mike McCarthy has revealed significant confusion and contradiction in published accounts of the locomotive story on the Goodwood operation (to which more detailed examination may be given at some other time).

While examining the published photographs for clues, a realisation dawned. The photograph of *MONA* as rebuilt on page 16 of LR 124 shows it to be none other than the "Koppel" on page 27 of LR 108. This discounts the previously-held view that *MONA* was dismantled for use in the construction of Ezard's articulated locomotive. However, a look at some photos of Ezard's loco did not seem to pose any difficulty in this regard as parts from only one locomotive can easily be recognised.

We now can be fairly sure that *MONA* was Krauss 6415 of 1910, but what about its replacement boiler following the 1915 explosion? The photographs of *MONA* as rebuilt show an Orenstein & Koppel boiler was fitted, but with Australia at war with Germany at the time it seems that the boiler must either have been on hand in Australia or else was obtained from another locomotive. I believe that it is likely that as a result of the emergency the boiler (at least) from *LILY* was shipped from Beria to the foundry in Melbourne where the Goodwood company's major repairs were carried out.

There was an Orenstein & Koppel on the Goodwood Company's line, 3961 of 1910 (*LILA*) and it seems that this was already under repair at the foundry at the time of the explosion. My examination of the photographs has been unsuccessful in determining whether it was *MONA* or *LILA* which might have ended up with a boiler from Western Australia, but the two locomotives each seem to have re-entered service equipped with an Orenstein & Koppel boiler. (One may have been fitted with the boiler from Western Australia and the other with *LILA*'s rebuilt boiler.)

So it seems that when in 1925 a Queensland machinery inspector called the second-hand locomotive at Neranwood a Koppel and his colleage further north fifteen years later at Plane Creek Mill referred to it as a Krauss, they were each half right!

General Electric Locomotives for Australia (LR 140 & 143)

My American correspondent, Ron Stafford, has discovered another pair of General Electric locomotives despatched to Australia. They were General Electric 12205 and 12206, shipped in March 1938 to the Australian GE Company to requisition number I-23105. The only other information available is that they had 40 volt motors. Can any reader provide any more information?

John Browning
Rockhampton, Q.

Dear Sir,

General Electric Locomotives for Australia (LR 140 & 143)

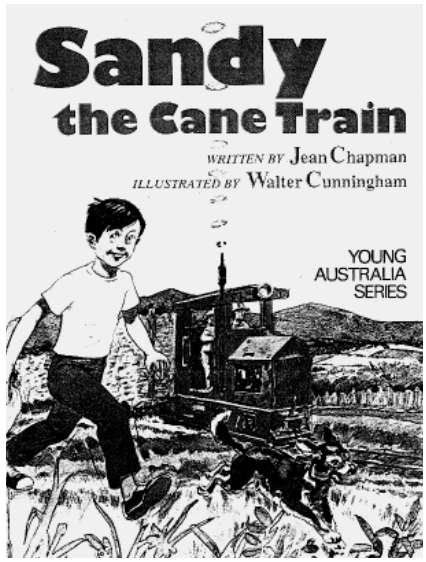
I was interested in the reference to seven deliveries for "Wesport Stockton Mining Co, NSW" in the list of General Electric locomotives. These are quite clearly 3ft gauge electric locomotives for the Westport Coal Co. at their Stockton Mine, just a few miles up the coast from Westport, New Zealand. It is assumed that they were ordered through Westport's Sydney office, and General Electric would therefore have assumed that they were to be used in New South Wales.

Peter Dyer
Wainuiomata, New Zealand

Dear Sir,

Light Railways in Children's Literature (LR 142 and LR 144)

Sandy the Cane Train is one of those rare



children's books on trains; one where an internal combustion locomotive is a 'hero' at the expense of a steam locomotive, the reverse of the normal situation!

The basic plot involved (without giving too much away) a race between two steam locomotives hauling sugar cane to the mill, which resulted in an accident, causing the main line to be blocked. The eventual solution to bringing the cane to the mill was for a Malcolm Moore locomotive to run a shuttle service over a light branch line to avoid the crash site.

According to the author, Jean Chapman, this was based on a real incident that she witnessed during a holiday to Queensland during the early 1960s. The line belonged to the Moreton Central Mill, at Nambour. After the clean-up, the author had the pleasure of 'driving' a proper cane train engine and, as she observed "...there was NOT a second accident as a result!"

Ms Chapman used the name *SANDY* after an actual locomotive, named after a driver who was killed at Changi P.O.W. camp during World War Two. Apparently, this engine is displayed at the mill as a memorial, and the book sold at the mill's office, with the proceeds going to a Nambour charity.

This was her second book and was originally produced for the ABC *Kindergarten of the Air*. Angus & Robertson published two editions before it was transferred to the Young Australia Series, with illustrations by Walter Cunningham, based on photos of the accident and *SANDY*.

John Peterson
Warragul, Vic.

Dear Sir,

Mr Desmond Kennard, in his letter in LR 142 pages 30-31 "On FOTTE Days" asks if there may be a children's book produced for Puffing Billy. There is one - simply titled *Puffing Billy* by Esta de Fossard, photography by Haworth Bartram, published by Childerset Pty Ltd in 1978.

Without, I hope, giving too much of the plot away, it tells of the foiling of a plan by a woman passenger to steal the Mt Lyell carriage to turn it into a caravan. I suspect a number of the characters bear strong resemblance to PBPS volunteers of the time!

Hubert Du Guesclin
Willetton, W.A.

Dear Sir,

A recent locally-produced series of chldren's books is entitled *The Adventures of Lorry Loco the Sugar Cane Locomotive,* (story by Denise Kay; illustrated by Bruce Smith). These small books are published by "The Main Street Committee" in Nambour, Queensland, and tell of the adventures of *LORRY*, an imaginary diesel locomotive from Moreton Sugar Mill. I obtained my copies of three of the series at a Nambour newsagency. In this instance it is a case of life following art for in 1996 Moreton's E M Baldwin B-B DH *COOLUM* (5565-1-10-74 of 1974) received the additional name *LORRY* (and a face!) following the appearance of the first book. This locomotive normally handles the shuttle service of cane from Howard Street yard to the Mill, so it is the one most often seen by the public as it runs down the centre of Howard Street and across the famous crossing of Currie Street on its way to the mill.

John Browning
Rockhampton, Q.

Dear Sir,

The Cobdogla to Loveday Light Railway (LR 145)

Light Railways readers may be interested in the origin of 'Ode to the Pipeline Irrigation Scheme' by 'Jonunta', on page 9 of LR 145.

This is a parody of 'The Song of Hiawatha', a poem written in 1855 by Henry Wadsworth Longfellow (1807-1882). Longfellow was considered to be the most popular American poet of the 19th century.

'The Song of Hiawatha' was written in a sing-song style and, over many years, has provided a rich lode for the parodist to mine.

I have no doubt that 'Jonunta' (John Hunter?) was taught this poem at school.

W. A. Pearce
Kensington, Vic.

Dear Sir,

Britton Bros Tramway (LR 143)

I was interested to read Tony Parnell's account of Britton Bros sawmill tramway. I

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had the experience of visiting that place for the first time in 1960 and doing a trip over the line with Phil Britton.

I saw the "Flying Fox" log handling taking place with the Fowler ploughing engine (it was much larger than a traction engine). This engine was one of seven imported from England by a Mr Lunn and his partner for a contract with the Tasmanian Hydro about 1948; they were mechanically modified for the job by the addition of extra winches. They were later offered for sale and No. 16719 was bought by Brittons. I think all seven have survived into preservation, 16719 and sister engine 16720 eventually coming to Sydney.

Enclosed is a photo of a Brittons outing with Rev. Cedric Thomas, the well known light railway historian, in whose parish the Brittons lived.

Also enclosed are photos showing the remains of *SPIDER* and a Climax bogie at the mill site, and the two Climax locos discarded at Montague Swamp after their bogies had been reclaimed for use on the proposed "Trail" type locos, of which only one was built - shown on the lower half of page 15 in *Light Railways* 143.

Bruce Macdonald
Chapman, ACT

Dear Sir,

Kioloa Logging Tramway (LR145)

This tramway was described in Michael Tracey's paper "Archaeological evidence for a horse-drawn tramway at Bawley Point, NSW" to the Australian Forest History Society's conference at Jervis Bay in November 1996 (proceedings published by the Centre for Resource and Environmental Studies, ANU, 1997)

The paper is also on the internet at http://artalpha.anu.edu.au/web/arc/about-us/studs/tracey1.htm

The paper provides a professional archaeologist's perspective on the search for and description of tramway remains. It contains background on the technology, some history of the area, location diagrams and has some excellent drawings of the remaining artifacts and the presumed construction methods.

Marine archaeology is not usually associated with light railway research but in this case it proved essential as many of the surviving artifacts are on the sea bed. These submarine remains show that the gauge was 4 ft (or a bit less?). Total length of the system was at least 13 km and it included a zig-zag.

I was also fascinated to discover that, in the motive power department, "Shire horses or Clydesdales...were genetically dominant": a bit like saying Hudswell Clarkes were genetically dominant at Wallaroo!

The study resulted in the conclusion that "the terrestrial and maritime archaeological evidence supports the idea that a wooden tramway system operated between Bawley Point and Termeil". However, after the preparation of the paper, it became apparent that the conjectured sawmill at Bawley Point was in fact primarily a ship-building yard.

Colin Harvey
Reservoir, Vic.

Britton Bros Tramway, clockwise from top: *Fowler ploughing engine B/N 16719/1926 , as modified with extra winches. November 1960. Photo: Bruce Macdonald.* ❑ *The ex-Simsville class A Climax locomotive abandoned at Montague Swamp. Photo: Bruce Macdonald.* ❑ *Derelict remains of the former Langley Vale class A Climax loco, March 1967. Photo: Ralph Proctor.* ❑ *Former Climax bogie (left) and wheels and cut-down frame of SPIDER, converted to a timber bogie (lower right), March 1967. Photo: Ralph Proctor.* ❑ *Well known light railway historian, the late Rev. C.B. Thomas takes some local children on an outing using Britton's railmotor. Photo: C.B. Thomas Collection via Bruce Macdonald.*

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RESEARCH

The Great Locomotive Quest

The story goes that a small contractor's engine intended to work on C&E Millar's 1885 Como Bridge contract slipped off its barge and sank in the waters of Botany Bay. American archaeologists have been quick to claim a vintage 4-4-0 which road builders uncovered beneath an intersection of Highway 301 in North Carolina. And, in 1976, New Zealand enthusiasts recovered a locomotive buried for decades in a bog, and it steams once again.

All of which suggests a certain fascination is attached to little old engines lost in the bush, or shunted into Davey Jones' locker.

Which brings us to Joadja.

The story of the 1067mm (3ft 6in) tramway that connected the shale mines and refinery of Joadja with the Great Southern Railway at Mittagong is well documented in text and photographs. But is the ultimate fate of the four Andrew Barclay saddle-tanks that worked the 25km line quite so certain?

The popularly accepted version of the tramway's closure late last century suggests that the latter years of all Joadja's locos are well accounted for - mostly on North Coast timber lines.* However, there is an unauthorised version of history that tends to suggest one of the engines is missing. Which brings us to the Great Locomotive Quest of 1998.

According to the "oldest living inhabitant" (OLI) who spent her girlhood beside the Joadja tramway, the last of the Andrew Barclay locos was never removed, but remained stranded on a section of track at Mittagong long after the mines ceased production.

No one took much notice of the unfortunate little engine, except to use the area around it as a rubbish dump. Eventually time and rain eroded the right of way and it toppled sideways into the mud, finally disappearing from view. No tears shed. No historians' red alert. The said OLI, now a sprightly resident of a local retirement village, claims she knows exactly the loco's last resting place; all you have to do is extend a line from the back fence of the house in Lyell Street, where she once lived, until it meets the old Joadja right-of-way.

The target area, having become an unofficial walking track, is still quite accessible. In fact, what seems to be part of the old refinery retort survives as a much overgrown culvert. A few metres to the western side of where the Joadja trams once ran is the embankment of the Box Vale standard gauge colliery line, which follows a parallel path into the bush. [To digress for the moment, local folklore says that drivers of Joadja's Barclays and Box Vale's Manning Wardle dearly loved to race side-by-side on the journey out from Mittagong sidings.]

For a dynamic duo of investigators, the challenge of a little old engine lurking beneath their feet was too much to ignore. Professor John Simons, retired Dean of Science at Sydney University, powered up his metal detector and your correspondent equipped himself with crowbar and shovel.

Some hours of walking to and fro in the bush beyond Lyell Street intersection yielded assorted blimps and buzzes on Dr Simons' hand-held detector, yet none substantial enough to indicate a buried steam dome or driving wheel. Probes with the crowbar found a piece of rusted corregated iron from the remains of a bedstead. But not to be discouraged! Dr Simons, himself the son of a NSWGR engineer, had a special interest in pressing on, for, according to family lore, his late aunt's father could also recall an old locomotive left behind when the Joadja works closed.

Dr Simons, archivist of the Berrima District Historical Society, is keeper of a portion of a firebox grate, believed to have come from one of the Joadja locomotives.

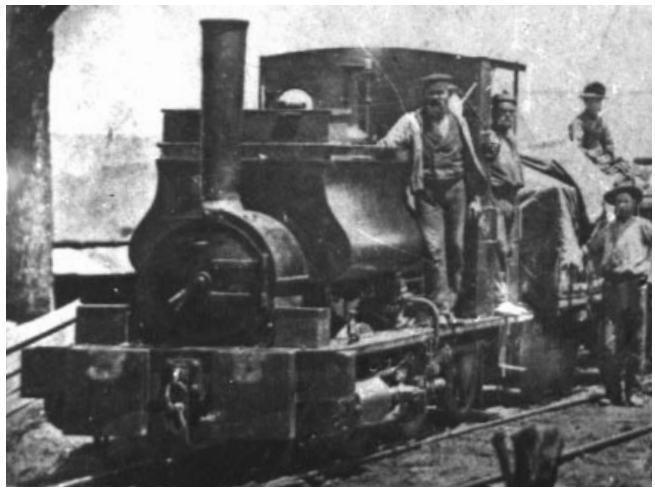
To intensify the hunt, the next step brought in a metal detection contractor, the owner very obligingly donating his services in the cause of railway history. Armed with this much more sophisticated device, he walked the OLI's designated embankment locale, making ever-wider perambulations of the surrounding scrub. This time the blimps and buzzes were rather more substantial - but convincing enough to delineate the outline of an entombed Andrew Barclay?

"After 90 years elapsed, we could be searching in the wrong place," said our expert. "The locomotive may have shifted just far enough to be out of reach. Then again, with all that rubbish piled down there, we may never know. You blokes had better hire a bulldozer or backhoe. Then I'll come back and make another sweep."

The dynamic duo exhanged meaningful glances, and said "thanks. We'll think about it," and slowly walked away. And there The Great Locomotive Quest doth end.

David Burke, 12/98

Dr John Simons (L) and David Burke search for the "mystery" locomotive, on the right-of-way of the old Joadja tramway at Mittagong. In the background, to the right, is the embankment of the former Box Vale Colliery line. *Photo: Catherine Burke*



An early view of Andrew Barclay 0-6-0ST B/N 180 of 1878, the first of four locomotives to operate at Joadja. Whilst the post-Joadja movements of its three colleagues are well documented, the ultimate fate of this loco is less certain. Was it scrapped at Coffs Harbour in 1915? Or might its remains lie buried on the outskirts of Mittagong?
Photo: Berrima District Historical Society, from K.B. Kranfield Collection

* See Horne, RT, "Andrew Barclay Locomotives in Australia", *ARHS Bulletin* No. 560, June 1984.

The Global Positioning System- An Aid to Light Railways Research

The nature of light railway research and, indeed, much of the fun of it is the outdoor activity that goes with it. Hour upon hour of desk-bound work delving through old newspapers, official records and interviews is an essential ingredient to well researched work. However, equally important, is the on the ground mapping and 'deciphering' that goes with working out the broad picture of tramway operations as well as its detailed 'whys' and 'wherefores'.

Having the right tools is a must in order to maximise the information gathering that goes with this activity. Much of the enjoyment

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comes from the looking and discovery process, but by having good gear with you and using it systematically you can add to the enjoyment and create a valuable record that can be analysed and put into context later. The traditional tools of a light railway 'bush-basher' (excluding food, water and a suitable snake deterrent - a big stick) include topographical maps, compass, notepad, tape measure and machete. In recent times pedometers, altimeters and inclinometers have also come into a price range within reach of most researchers and can prove most useful.

Unquestionably though one of the most useful tools to come within reach of your average researcher in recent times has been the Global Positioning System (GPS). There are now many units on the market and, although they each have their differences, they all track American global positioning satellites. The system has been in operation for around a decade for military, shipping (air and sea) and emergency service use but the cost of tracking devices has prevented widespread use by private citizens until recently.

Most good quality units cost $600-700 and will track between 5 and 12 satellites continuously. The accuracy of all however is limited to within 100 metres on 90% of occasions. This is mainly because of a deliberate 'wobble' placed in the satellite signals by the Americans to prevent someone else using their system to lob 'nasties' at them with considerable accuracy.

The removal of the wobble, however, is scheduled within the next 2-3 years. This will greatly increase accuracy, but if you keep in mind that most of us use 1 in 25,000 maps to record findings, even with the wobble, specific positions determined by your GPS unit will presently be within 4mm of the true location on the map most of the time! Less expensive units are available but beware that some of the lower cost units do not work well under tree cover (not much good in the bush!).

The principle item of information the units provide is the grid reference of your present location. This can be recorded in the unit along with a description and referred to later. Most units will, however, do much more. Several have a 'Tracking' function which records continuously where you have been. This can prove very useful if you have been following a tramway for sometime. It allows you to map as you go and download to your PC later.

Most have the capacity to prerecord a location you wish to reach. As you move towards that point the unit will continuously tell you, no matter where you are, what the bearing and range is to your desired destination. This has proven very useful recently when trying to find my way back to a particular spot in the bush at Big Pats Creek. The unit guided me straight to within metres of where I needed to be without any fuss at all. In doing so it saved me perhaps an hour of bashing around looking for signs of my previous visit.

Most units will tell you how far you have travelled and your altitude (with considerable inaccuracy!). Back tracking function is also useful at times. It will direct you back over the route you have followed including any turns. It is good to know you can find your way out again!

I personally have two units (you can never be too careful! - just joking). My older unit (a Silva) does not track as many satellites as my more recent acquisition (A Garmin 12XL) but it has features that are still not available on any other unit and has proven immensely valuable.

The usefulness of both units was demonstrated just recently. The Silva has a Navimap attachment that allows you to calibrate any map and by using a puck, select and record specific locations. I used this feature along with the Garmin to solve a problem I have been scratching my head about since 1983.

After the Ash Wednesday bushfires of that year I came across what turned out to be a logging tramway along the Mississippi Creek out from Warburton. The problem was it disappeared into a recently bulldozed logging coup and could not be followed to its source. The issue was whose tramway was it? The mills in the area were well known and were marked on official maps, but recent logging activity had destroyed much of what remained. This tramway, however, led to none of them. So what on earth was this tramway doing pointing in the direction it was? My GPS units provided the answer to the conundrum. I selected the nearest mill to the log tramway and determined to test its given location. On the ground the tramway, for geographic and gradient reasons, could not have served this mill given its stated location. Early aerial photographs clearly showed the mill as the usual white 'blob'. Without roads to provide reference points, however, it was difficult to translate the blob to a modern map. But, the aerial photo did contain two other points for which precise location details were known.

The photo was placed on the Navimap device attached to my Silva GPS unit just as you would place a map and calibrated using the two known points. A click on the blob and I had the precise longitude and latitude of the mill. The photo was removed and replaced by a modern day map showing the official location of the mill and the plot of the tram found in 1983. After a quick re-calibration I brought up the mill's location as found from the aerial photo. The puck was run across the map until it indicated it was pointing at the mill site.

Surprise, Surprise! It showed the mill as being well to the east of the location on official maps, and directly in line with the heading of the mysterious log tramway. Problem solved!

Lesson; don't trust maps completely. They can be wrong.

The final step in this little saga was the transfer of the mill location to the Garmin. A journey out into the area had the Garmin beeping at me telling me when I was within 100 metres of the mill. Sadly there was nothing left to see, but it did point me to the precise location of the tramway, which had been very difficult to find after the post-fires regrowth.

Overall it has been a very useful addition but only as an extra tool. The traditional tools of machete and compass, coupled with eyes and brain, continue to be the most valuable instruments as ever.

Mike McCarthy

The Australian Mining History Association Conference 1999

This conference will be held in Hobart from 29 September to 1 October. Papers are invited on any mining history or related topics. Abstracts of no more than 300 words must be submitted before 30 May. Please forward in tent to participate ASAP. Contact Mel Davies, Dept of Economics, University of WA, Nedlands 6907 for further details.

Photographs on the Internet

Two readers have drawn our attention to Sites that provide access to information about important historical photographs. Desmond Kennard has passed on an announcement by the State Library of NSW that PICMAN, the Mitchell Library's database of its piuctures and manuscript collections is available on the Internet at http://www.slnsw.gov.au/picman/picman.htm

During 1999, a further 200,000 images from the old Government Printing Office discs will be loaded onto PICMAN. This collection includes many excellent images of the industries of NSW and their associated railway operations.

Jim Longworth advises that the Lake Macquarie City Council web site provides access to images held in the City Library. Images noted include the Pasminco (Sulphide Corporation) Smelters, including electric locos, and the following collieries: Lambton, Newstan, Rhondda, Wallarah (Catherine Hill Bay), Waratah and West Wallsend.

Bundaberg Foundry

Some readers may be interested to know that there is a copy of the original Bundaberg Foundry Co. Ltd. drawing for a four-wheel cane truck for Racecourse Mill, dated 5 November 1954, located on the internet at:

www.geocities.com/bourbonstreet/quarter/2619/cane.gif.

Jim Longworth

Warburton Logging Tramways

Did any of our older readers visit the Seasoning Works at East Warburton during the time they were working or soon after? In particular I am interested in diagrams of trackwork that may have been taken at the time of the visit. The information is required for the forthcoming book dealing with the tramways of Warburton. If you think you can help please contact Mike McCarthy at 27 Verbena Ave., The Basin VIC 3154 or E-mail at: mike.mccarthy@mas.vic.gov.au

Mike McCarthy

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Heritage &Tourist

NEWS

Queensland

DREAMWORLD PTY LTD, Coomera 610mm gauge

Two trains were being operated at the height of the Christmas tourist season, at a regular 10 minutes interval. One train was hauled by Baldwin 4-6-0, 4 *CANNONBALL EXPRESS* (45215 of 1917), with impeccable red paintwork, and consisted of one of the original toastrack bogie coaches (402), one of the Dreamworld Freight Lines open bogie cars (503), a second toastrack (401), and a new unnumbered bogie car with a low floor between the bogies. This car includes accommodation for wheelchairs and the guard, and is fitted with air-brake equipment reportedly driven off an axle.

The second train was headed by blue Motor Rail "Simplex" 4wDM 21543 of 1956, hauling open car 501 and toastrack 403 which has been fitted with an internal-combustion powered compressor for the air-brakes. The little Simplex has been fitted with new bodywork and cab at Dreamworld, and handles its short but heavy train well around the curves and up the steep grade at one end of the line. The need for regular diesel haulage has been caused by a requirement for boiler work to be carried out on the Perry 0-6-2T (5643.51.1 of 1951). Its boiler was noted off the frame outside the rail workshops. Also here was John Fowler 0-4-0WT 16249 of 1923, which has also been stripped down for boiler examination, although it appears that no decision has been carried out to restore it to operating condition.

Another locomotive standing outside the workshops was Clyde 0-6-0DH 1 (DHI.7 of 1955) which arrived from Proserpine Mill late in 1998. It appeared to be in "as received" condition, and it is understood that its cab will have to be lowered to approximately its original height before it can be placed into service.

Further to LR 145 (p.27), the "Enchanted Forest Railway" has been a victim of the development of new attractions. Its loco, Ruston & Hornsby 4wDM 218002 of 1943, is understood to have been dismantled, with certain mechanical parts scheduled to go to ANGRMS at Woodford, but the chassis is thought still to exist somewhere at Dreamworld.

John Browning 1/99; Peter Gough 1/99

DURUNDUR RAILWAY, Woodford 610mm gauge
Aust. NG Railway Museum Society

A visit to the railway on 31 January found 0-6-2T No. 5 (Bundaberg Foundry 5 of 1952) as the operating locomotive, with healthy passenger loadings on the regular runs over the line. Hudswell Clarke 0-6-0 *MELBOURNE* (1701 of 1938) was parked beside the loco shed with rebuilt tender, apparently nearing the finale of its restoration project.

The picnic area at the entrance has been considerably upgraded and work was nearing completion on the extension to the main station, with the restoration of the station building from Wamuran nearing completion.

The Durundur Railway operated on a daily basis over the Woodford Folk Festival (27/12/98 to 1/1/99). Passenger figures were generally up on the previous year despite one wet day that resulted in a new record for minimum revenue! Passenger figures during 1998 were up by 21% compared to 1997. Editor 2/99

PETRIE PARK, Nambour
610mm gauge
Sunshine Coast Railway Modellers Society

Former Moreton Central Mill Dick Kerr 0-4-0T locomotive *VALDORA* (built 1891), has again been restored as a static exhibit and placed in Petrie Park adjacent to the Model Railway Society. The restoration project was undertaken by a team of 40 young, unemployed Sunshine Coast residents under a Landcare and Environmental Action project (LEAP). The locomotive has been finished in ìbright coloursî. Mike Stanley, a spokesman for Namtec, said the project, which commenced in 1995, taught participants basic engineering and fitting skills.

The diminutive Dick Kerr locomotive was purchased new by Farleigh sugar mill at Mackay in 1891. It was transferred to Racecourse Sugar Mill in 1927, then went to the Moreton Central Mill in 1937, where it was named VALDORA. It was withdrawn in 1967 and has since bided its time in various parks at Nambour, coming under the ownership of the Sunshine Coast Railway Modellers Society Inc. in 1985.

Hinterland Herald, 28/1/99 via Editor

ST. HELENA ISLAND TRAMWAY, Rotary Club of Wynnum-Manly, 610mm gauge

This island contains the ruins of a prison and is served by regular tourist boats operating from Manly [see LR 140, p.22]. The tourist tramway commences near the landing and runs along the formation of the original 3ft 6ins gauge horse tramway for a few hundred metres to a spot close to the prison, and there is a run-round loop at each end. A covered station has been built at the seaward end but the locomotive, Baguley 0-6-0DM 3377 of 1953, stands in the open. The train consists of twelve four-wheel cars of cane railway origin, which have link-and-pin couplings. It is believed that they came from "Sugarworld" at Cairns. The train is crewed by the guides from the tourist boat.

A house at the prison has been restored as a museum and contains a model which shows the use of tramways at the gaol, as well as a selection of old photographs. The tramway was also apparently used to connect the gaol with some other parts of the small island, including a sugar mill. Also on display at the museum is the man-powered pumper car illustrated in LR 140. It is said that South Sea or Torres Strait Islanders were the favoured operators, and that is was known as the "Kangaroo" car because of its jerky movements and its propensity to leap the rails. Interestingly, this vehicle is fitted with bell brakes.

John Browning 1/99

Coming Events

APRIL 1999

3-5 Alexandra Timber Tramway & Museum, Vic. Train operations with Fowler and Kelly & Lewis locomotives, plus Marshall portables and Buffalo Pitts traction engine. Additional attractions will include restored IC engines and a craft market. Phone 015 50 9988.

3-18 Semaphore & Fort Granville Tourist Railway, Port Adelaide SA. Steam trains (457mm gauge) operate daily during school holidays.

4 Cobdogla Irrigartion & Steam Museum, SA. Museum pump and steam day. Phone 08 8588 2323.

4-5 Wee Georgie Wood Railway, Tullah, Tas. Steam train operations 1200-1600; final operation for season. Phone (03) 6234 8233.

10 Beaudesert Shire Tramway and Lahey's Canungra tramway, Q. are included in a coach tour to closed lines south of Brisbane. Trainaway Tours (07) 3399 4209.

10-11 Hunter Valley Steamfest, Maitland, NSW. Special operations at the Richmond Vale Railway and many other attractions. Phone 02 4936 1124 for details. 3801 Limited will operate steam trains from Sydney both days, for bookings phone 1800 64 3801.

17 Sunshine Coast Light Railways, Q. coach tour. Sunshine Express RailTours (07) 3371 4231.

18 Cobdogla Irrigation & Steam Museum, SA. *Loveday Flier* train rides; Phone 08 8588 2323.

24 Puffing Billy Railway, Belgrave Vic. *Peter Peckett,* Puffing Billy's little brother, will run trips from Gembrook. Phone (03) 9754 6800 for information.

MAY 1999

1-2 Lake Goldsmith Steam Rally, Vic. Steam traction engines, power station and shovel, plus oil engines, old tools and vintage cars. Phone 03 5349 5512.

2 Puffing Billy Railway, Belgrave Vic. Great Train Race Fun Run. Phone (03) 9754 6800 for information.

8-9 Menangle Narrow Gauge Railway, NSW. Expo weekend steam rally, with 610mm gauge steam and diesel-hauled trains in operation. Phone (02) 4681 9237.

9 Puffing Billy Railway, Belgrave Vic. Motherís Day Luncheon Special.

15-16 Puffing Billy Railway, Belgrave Vic. Friends of Thomas The Tank Engine Day. Special trains, food and the Fat Controller will be in attendance!

16 Cobdogla Irrigation & Steam Museum, SA. Steam Day, *Loveday Flier* train rides; Phone 08 8588 2323.

23 Bennett Brook Railway, WA. Friends of Thomas the Tank Engine Day. Steam and diesel-hauled trains, with the Fat Controller in attendance. Phone 08 9249 3861.

29 Puffing Billy Railway, Belgrave Vic. *Peter Peckett,* Puffing Billy's little brother, will run trips from Gembrook. Phone (03) 9754 6800 for information.

JUNE 1999

16 Cobdogla Irrigation & Steam Museum, SA. Museum Pump and Steam Day; Phone 08 8588 2323.

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Russells Ridge Railway: 2-4-2 locomotive No.3 hauls a train across the new trestle bridge. Photo: Jim Denmark

Harry Wright caught Hudswell Clarke 0-6-0 1862 of 1953 heading a train at Timbertown, in September 1997.

UNDERGROUND MINING WORLD, Mt Isa 1067mm gauge
This tourist attraction is being developed by Mt Isa Council to provide first-hand experience of past mining practices. In December 1998, MIM Limited handed over old mining equipment for the project to the Mt Isa mayor Ron McCullough. It included a rail shovel and a track shovel.

Chris Hart, 12/98

New South Wales

RICHMOND VALE RAILWAY,
1435mm gauge
Richmond Vale Preservation Co-operative Society Ltd
The Society held its 5th *Santa Special* day on 6 December 1998 with all-day entertainment for family groups. Three locomotives, ex-SMR 2-8-2T No.25 (Beyer Peacock 6126/1922), 0-4-0ST *MARJORIE* (Clyde 462/1938) and the Planet 4wDM (Hibberd 3715/1955) were in service. No.25 operated six trains to Pelaw Main, *MARJORIE* operated the *Santa Special* and seven trains to Mulbring Road and the Planet hauled the *Prime Possum* Special, then gave brakevan rides within the station yard. In its capacity as yard shunter, the Planet was used to place six of the Society's stainless steel carriages into the carriage shed on 9 January following their transfer from Weston by road.
MARJORIE received its boiler washout and annual boiler inspection over the Christmas period. The boiler for No.5 steam crane has passed its hydrostatic test and has been replaced on the chassis.
Link Line Jan/Feb 1999; Steve Shotton, AusRail News Group, 12/1/99

RUSSELLS RIDGE RAILWAY, Mandalong 178mm gauge
Jim Denmark
Further to the report in LRN 97 (p.5, Dec. 1993), this miniature railway, located near Morriset in the Hunter Valley, has recently completed a 100m extension to the track. It features a 13 metre long trestle bridge and 1 in 20 grades. The new bridge incorporates steel girders rescued from an old mine site, bush timber poles and sawn timber decking. The railway seeks to recreate an Australian scenic narrow-gauge railway of the past.
The locomotives, built in 4in to the foot scale, are a scale model of a Perry 0-4-2T canefield loco and a 2-4-2 tender loco, also built in Perry style. The railway usually operates on Sundays between April and November. The railway can be inspected by LRRSA members free of charge.
Intending visitors should contact Jim Denmark on 02 4973 1315.

Jim Denmark, 2/99

STATE MINE RAILWAY HERITAGE PARK, Lithgow
1435mm gauge
The Construction Forestry Mining and Energy Union has recently provided a grant of $38,000 for the completion of erection of the 100ft high steel poppet head from Newstan Colliery at the Lithgow State Mine.
This brings the total amount of grants provided from the Miners' Trust Fund for this project to $118,000. Engineering support for the erection of the poppet head will be provided by Pacific Power International. The poppet head is almost identical in dimensions to the original State Mine downcast shaft poppet head. It will be a fitting landmark for the State Mine project.
Planning is proceeding, in concert with Lithgow City Council and Lithgow Historical Society for project works associated with the Centenary of Federation. Significant progress on this project is expected later this year and early in 2000.
Commencing in March 1999, the State Mine Heritage Park will hold a series of regular operating days on the first Sunday of each month. These will include steam equipment, mine transporter rides and other entertainment. A planned feature of these days will be working bees on wooden coal skip restoration. It is even planned to build new skips using fittings recovered from old frames and bodies. As rail operations come on line, rail passenger trips will also be featured in the operating days.

Ray Christison, 2/99

TIMBERTOWN, Wauchope
610mm gauge
Hastings Council
This tourist theme park (see LR 140, p.24) with its narrow gauge steam railway, closed in mid-1998.
Hastings Shire Council announced in early February 1999 that the park would reopen in March

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after negotiations with several independently-owned and operated businesses were finalised.
However, the new-look Timbertown will be operated in a different manner and the emphasis will be on attracting businesses. An auction sale of surplus equipment on 13-14 March 1999, including 'steam locomotive, train antiques, collectables and locomotive parts', will generate funds for critical maintenance activities at Timbertown. This includes train and steam traction engine repairs, so a tourist train operation is apparently planned to continue.
Further advice on developments here would be appreciated.
Port Macquarie News, 3/2/99, via Michael Marczan; *Old Machinery Magazine,* Feb-Mar 1999, via Bruce Belbin

TODDS MACHINERY & STEEL, Albury
Noted on 3 January 1999, together with a variety of other equipment on sale was Hudswell Clarke 610mm gauge 0-6-0, 1555 of 1925, ex Sandhurst Town, Victoria. This locomotive is without a tender.
Ray Graf 2/99

Victoria

ALEXANDRA TIMBER TRAMWAY & MUSEUM
610mm gauge
A successful operating day was held on 13 December despite wet weather. John Fowler 0-6-0T (11885 of 1909) was in operation. A new feature at the museum is a pair of timber workers huts built by Alexandra service clubs to provide a 1920s atmosphere to the railway environment.
The railway will be operating on the second Sunday of every month during 1999. There will also be operations on Easter Saturday, Sunday and Monday between 10am and 4pm. Both the Fowler and Kelly & Lewis locomotives are scheduled for service, as will be the two Marshall portable steam engines and the Buffalo Pitts traction engine. Additional attractions will include restored IC engines and a craft market.
Peter Evans; Peter Medlin, 1/99

At Alexandra, two timber workers' huts have been constructed by the Alexandra service clubs, to add atmosphere to the railway environment. *Photo: Peter Medlin*

On a wet December day, John Fowler 0-6-0T 11185 of 1909 hauls its train at Alexandra. *Photo: Peter Medlin*

BASS VALLEY RAILWAY
610mm gauge
Further to the report in LRN 110 (p. 20), passenger trains were running on 28 December 1998, with trains hauled by one of the four Ruston & Hornsby 4wDM locomotives from Cheetham Salt. In the shed was another of these locomotives, this one rebuilt with hydrostatic transmission and looking good with a new full width cab and fresh paint. A further hydrostatic unit previously on site here is said to be away for rebuilding at present. A 2-cylinder Ruston & Hornsby unit was said to be dismantled and dumped in an adjoining paddock. (This would be Model 20DLU 320555 of 1951. The three Ruston 30DL locomotives were 252805 of 1947 and 285309 & 285310 of 1949, numbered 1, 2 and 3 respectively at Cheetham Salt. (Can anyone say which loco(s) at Cheetham were converted to hydrostatic? - JB)
Ray Graf 2/99 via John Browning

JOHN BALE, Porepunkah
610mm gauge
John has obtained Jenbach 4wDM 2216 of 1958 from Russell Savage of the Tinbeerwah Mountain Railway at Cooroy in Queensland. The locomotive left Queensland on 12 December 1998 together with about two tons of rail
Russell Savage 12/98

PUFFING BILLY RAILWAY
762mm gauge
Emerald Tourist Railway Board G42 Restoration Project.
The Garratt is taking shape as a complete locomotive again. The front and rear water tanks have been permanently attached.
During December 1998, the main steam ball joints and the main steam pipes were installed on the engine units. The speed recorder drive arm and link, together with the front unit valve gear reach rod have been fabricated.
In January the connecting rods were trial fitted, the sand pipe was being fitted and the lubricator was being prepared.
Peter Medlin 1/99; PBR Home Page 2/99

RED CLIFFS HISTORIC STEAM RAILWAY INC. 610mm gauge
The Victorian Rail Safety Directorate granted accreditation to this tourist railway during

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December 1998. It is accredited as an operator and provider of rolling stock. Further to the report in LR 144, work is proceeding on conversion of about a kilometre of broad gauge track on the former Red Cliffs-Morkalla branch line to 2ft gauge. Bruce McLean, 1/99

SOVEREIGN HILL, Ballarat

Two replica mines are to be established at the Sovereign Hill tourist complex to enhance visitors' experience of the gold mining era. The State Government has announced a $1.3 million grant for the project, which is to be matched on a dollar-for-dollar basis by Sovereign Hill.

One of the mines will be an exact replica of the Red Hill Mine where the 2217 oz Welcome Nugget was found. The other, the New Australia Mine, will open some old mine workings and tell the story of the biggest Ballarat mining disaster, which claimed the lives of 22 men. This underground mining operation will be accessed by a ride using a replica of a mine tramway locomotive.

The new replica mines are scheduled for completion in mid-2000. Further details of the proposed underground tramway are welcome.

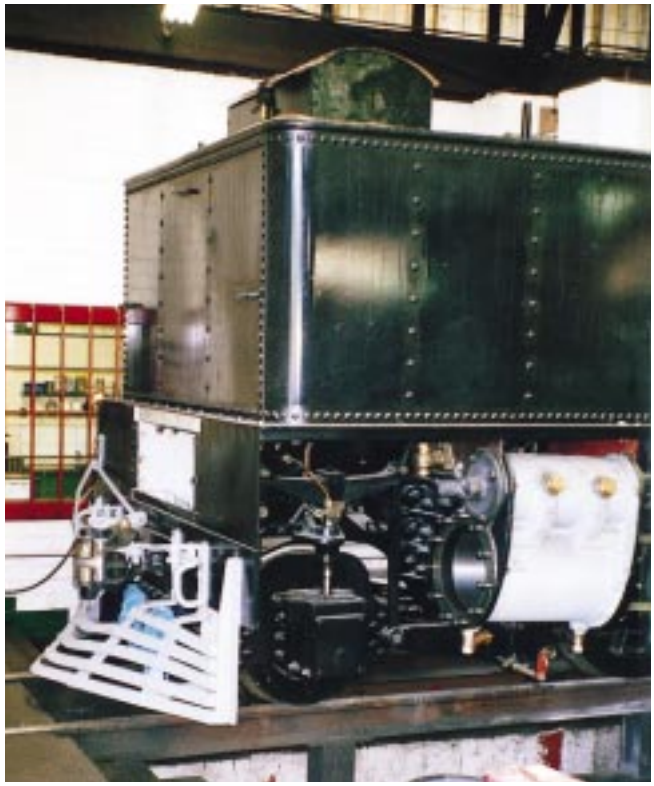
The Courier, 19/12/98 via Norm Houghton

WALHALLA GOLDFIELDS RAILWAY 762mm gauge
Walhalla Tourist Railway Committee of Management

On this tourist railway (LR 144, p.24), EM Baldwin 4wDH 30 (3225-1-2-70 of 1970) was noted out of use on 27 December 1998. It was reported to have failed the day before in an episode described as *ten minutes of glory then ten minutes of shame as we managed to put it away.* In the meantime, John Fowler 0-6-0DM 14 (4210051 of 1951) soldiered on hauling passenger trains. Ray Graf 2/99;

WEST COAST RAILWAY, Ballarat

Among the main line rolling stock at the depot here on 30 December 1998 was noted the remains of a 1067mm gauge Vulcan Iron Works 0-6-0ST (presumably 2540 of 1916 ex Fyansford Cement Works) and the 1600mm gauge 0-6-0DM ex Brunswick Plaster Mills, Nowingi (built on the frames of steam loco Y413). Ray Graf 2/99



The front unit of Garratt G42 in Belgrave workshops, 12 December 1998, with the water tank now permanently attached. Photo: Peter Medlin

Tasmania

ABT RAILWAY RESTORATION COMMITTEE, Queenstown
1067mm gauge

Further to LR 143 (p.23), the firm of Sinclair Knight & Mertz was appointed as project manager for the Mt Lyell Abt Railway project on 8 January 1999. SKM will prepare a development plan and environmental management plan, identify all project requirements, prepare tenders, and work with the bipartisan consultative committee. Tasmanian Bill Lawson, who actually rode on the last train over the former Mt Lyell railway from Queenstown at the age of 14, leads the project management team. Bill's father once worked for the railway as a locomotive cleaner.

Entrepreneur Roger Smith has put forward a proposal for a European-style station at Queenstown with its own shopping precinct. This project has apparently divided local opinion. Demands by log truck operators for continued access to the Teepookana forest area along the former railway route beside the King River have also delayed project implementation. Government MHA John White, who chairs the Abt Consultative Committee, has proposed that the trains could carry pine from the Teepookana forest area. The proposal is reported to have gained 'cautious support' from Forestry Tasmania.

Russell Holland, 1/99; Michael Dix 1/99; *The Advocate* 9/1/99 via Colin Harvey; *Western Herald,* 15/1/99

Western Australia

BENNETT BROOK RAILWAY, Whiteman Park 610mm gauge
WA Light Railway Preservation Assoc. Inc.

Further to LR 145, WALRPA has obtained two grants from the WA Lotteries Commission. The transfer and re-erection of the Subiaco 45-lever elevated signal box of 1901 and 1924 platform canopy to Whiteman Park is being assisted by a $50,000 grant. A second grant of $100,000 will help fund the expansion of the railway's locomotive shed/workshop and carriage shed and the construction of an inspection and maintenance pit in a new 10m x 23m shed.

This project involves a major reconstruction of the yards at Mussel Pool to make room for the new buildings. Work on the yard reconstruction continued over summer and construction of the new sheds was scheduled to commence in February 1999. The steam locomotives underwent their annual inspections and maintenance over summer and, following failure of the Gemco loco, the Fowler 0-6-0DM *ROSALIE* (JF4110019 of 1950) was the only operational locomotive over summer.

The strict regime of water treatment for steam locomotives has given outstanding results.

Simon Mead 1/99; *BBR Newsletter* 2/99

PEMBERTON TRAMWAY COMPANY 1067mm gauge

This tourist tramway and railway operation continues to expand its scope, backed by an effective promotion campaign. The tourist trams, based on the design of early Fremantle trams, [see LRN 62, p.18] operate from Pemberton to the Cascades, Pemberton to Warran River Bridge, and Pemberton to Northcliffe with at least four and often six departures per day. Trams are operated by paid staff.

The tourist steam train operates over the former WAGR line between Pemberton to Lyle (Lambert) on Saturdays, Sundays and Public Holidays during the steam season (May to November). There are additional services during steam season during School Holidays. This operation uses former WAGR locomotives and rolling stock and therefore lies outside the scope of this column. However, as reported in our Industrial News section [see LR 145, p.21], this railway is also involved in log-haulage operations. Log hauling is carried out using the scheduled steam train passenger services operating as a mixed train. Generally, loads are brought down from Lyle on a Saturday train and empties taken up to Lyle on Sundays. Usually one to four bogie wagon loads of logs are hauled per week.

Outside the steam season, logs are hauled on an "as needed" basis using one of the "Y" class Bo-Bo diesels. Income from this is used to fund track maintenance work. Further news regarding these log haulage operations will be covered in the Industrial Railway section.

Simon Mead 1/99; Editor

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