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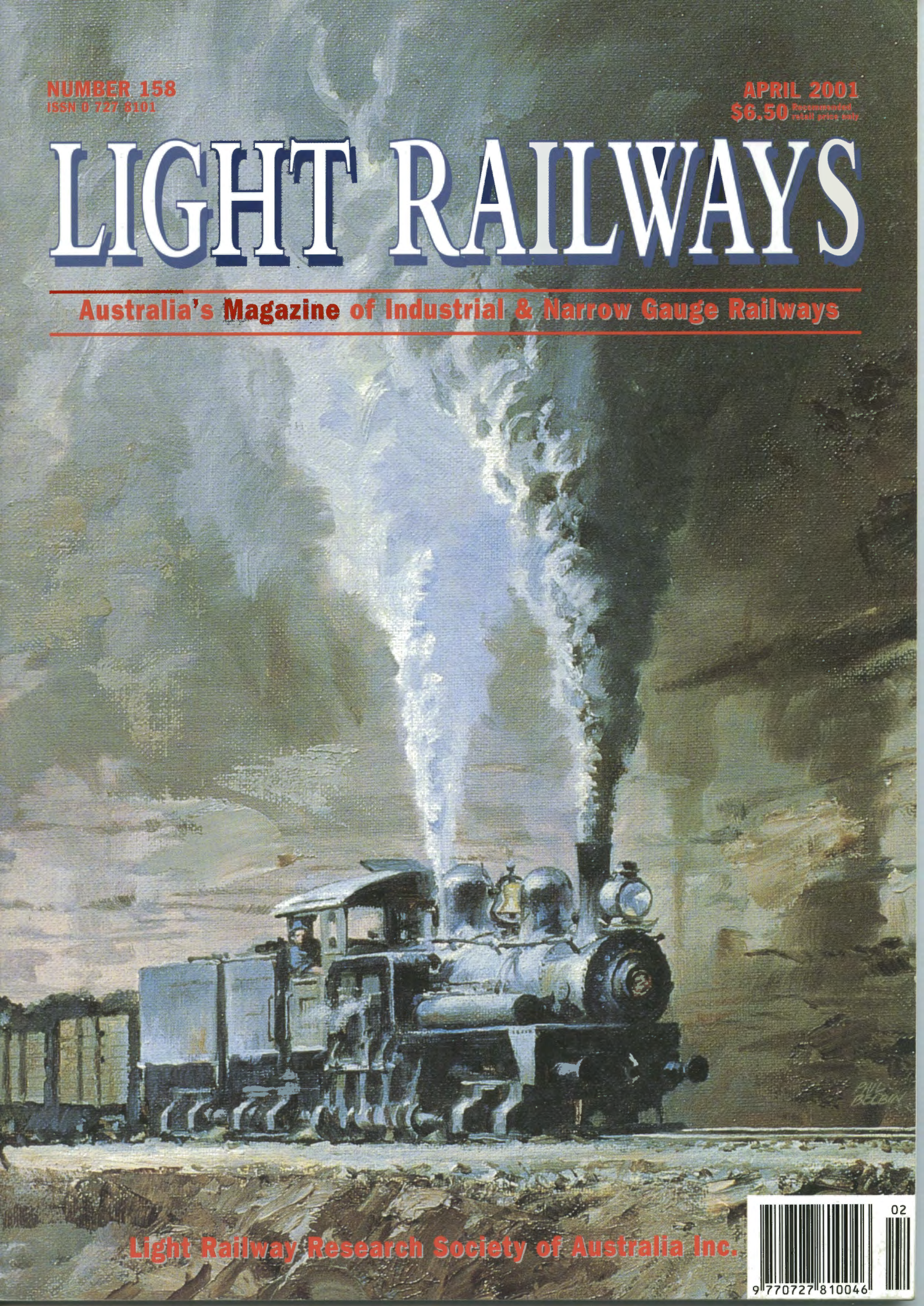
LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



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LIGHT RAILWAYS
Australia's Magazine of Industrial and Narrow Gauge Railways

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Editor: Bruce Belbin,
PO Box 674 St Ives NSW 2075.

Research, Heritage & Tourist Editor:
Bob McKillop,
c/o PO Box 674 St Ives NSW 2075.

Industrial Railway News Editor:
John Browning, PO Box 5646
Rockhampton Mail Centre QLD 4702.

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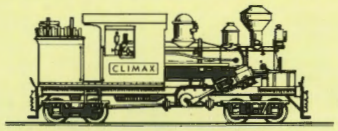

Light Railway Research Society of Australia Inc. A14384U
PO Box 21 Surrey Hills Vic 3127

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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

Contents

Comment

Light railways, within our definition, are an amazingly versatile species, able to effectively perform a wide variety of functions.

One of their most visible applications is in the amusement industry, where the genre has enjoyed a long association with zoos, theme parks and fun fairs. In Jim Longworth's article, beginning on page 3, we learn something of the history of an early participant in this sphere. In Lindsay Whitham's contribution (page 6), we see a remarkable horse-powered light railway built early last century to facilitate the construction of a major power station in a remote part of central Tasmania.

Light railways were utilised in both World Wars and, following the cessation of hostilities, much of the redundant equipment found further use in industry. Andrew Forbes' article (page 14) describes the restoration to working order of a former War Department Malcolm Moore loco which saw many years of service on track maintenance work at a Queensland sugar mill (a task now normally undertaken by specialised machinery and/or larger locomotives).

The continuing evolution of light railway technology is highlighted on page 17, in Industrial Railway News. A modern narrow-gauge underground system, engineered in Australia, is now helping to install new power cables beneath the streets of Auckland, New Zealand.

These, and many other, examples in our magazine serve to remind us that there's a lot more to light railways than meets the eye. *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.

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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.

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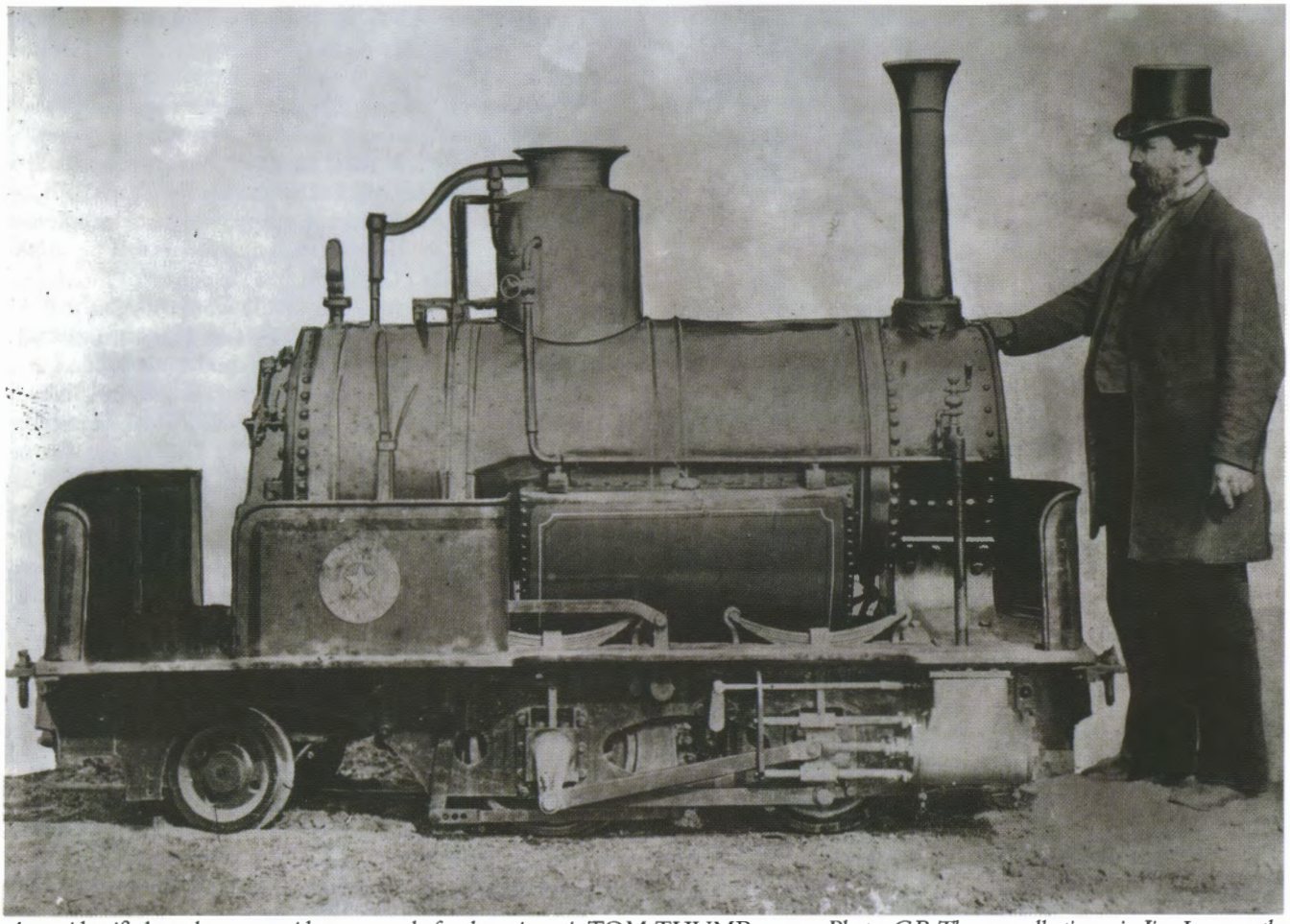
Cover: *Though its last train ran nearly seventy years ago, the Wolgan Valley Railway continues to fascinate. Last year saw the publication of* Shays in the Valley, *a 164-page book devoted to the history of the WVR (see review in LR 152), whilst this year has seen the release of an updated edition of Giff Eardley's & Eric Stephens' classic work* The Shale Railways of NSW *(reviewed on page 21 of this issue). In Phil Belbin's evocative oil painting, we see Class 'C' Shay locomotive No.2 (Lima 1994 of 1907) at the head of a short mixed train, circa 1910, passing beneath 'The Bluffs' and about to enter Penrose Gorge on its way to the NSW Government Railways connection at Newnes Junction, 25 miles away.*



An unidentified gentleman provides some scale for the enigmatic TOM THUMB. *Photo: CB Thomas collection, via Jim Longworth*

'Tom Thumb' at Botany

by Jim Longworth

Light railways have been a common attraction at Australian amusement parks and pleasure grounds for a long time. One line at Botany in Sydney's southern suburbs operated during the late 1800s.

The "Sir Joseph Banks Pavilion and Pleasure Gardens" at Botany, was a popular place of entertainment for Sydney residents during the 1880s, offering music, horse races, trick bike riding, horse breaking, skating, dancing and other attractions under the proprietorship of a Mr Frank Smith. Entry cost two shillings for adults and one shilling for children, but once inside the grounds all amusements and games were free.

The amusements on offer at the Gardens for Boxing Day, Friday, 26th of December, 1884, included: *The TOM THUMB STEAM-ENGINE [which] will run all day, carrying passengers, free of charge, on a new line 500 feet in circumference, laid and guaranteed by the celebrated engineering firm of John Fowler and Co., London, and 43 York-street Sydney. This is the most unique thing in railway engines ever run in the known world, and is really worth a visit by all scientific men.*[1]

During the year 1887 the locomotive and train were advertised as operating on many public holidays, eg: *Tom Thumb Steam Engine will ply all day.*[2]

The following year (1888) we read: *there were all kinds of sports for young and old, and the Tom Thumb steam engine had an exceedingly busy time of it.*[3] Later the same year we again read: *The miniature railway was at work all day and provided a favourite form of amusement for the children, who were all greatly pleased when treated to a ride on the car.*[4]

Based on the attached photographs, the gauge of the line appears to have been around 2ft to 2ft 6in. Assuming that the line was laid out in a circle and not an ellipse, the 500ft circumference gives a radius of 79ft 6in,[5] which is quite an acceptable radius for a line of such a narrow gauge.

But who built the locomotive?

The newspaper advertisement of December 1884 suggests that John Fowler and Company was somehow involved in setting up the line. While the newspaper report only says: *laid and guaranteed*, and does not say 'supplied', 'built', or 'equipped' by John Fowler, the phrase 'laid by' leaves plenty of room to incorporate either understanding. The advertisement does not mention the gauge of the line, nor who supplied the rolling stock. However the inverted water tank beneath the boiler and addition of end shields ('aprons') above the footplate at both ends, are intriguing features that are somewhat unusual in railway locomotive building practice. An under-slung 'belly tank' is evident on John Fowler B/N 4020 of 1880, a 2ft 6in gauge locomotive supplied to R Blackwood, Sydney, for Brooks & Co for an as yet unidentified buyer. The belly tank is an unusual feature, and is an even more unusual design for an Australian builder. The low front apron in front of the smokebox was a feature applied to Sydney steam tram motors, one of which had already been supplied by T Wearne in January 1884.[6]

The possibility that the locomotive was supplied by John Fowler has been considered, because the firm was specifically mentioned, and because the firm is known to have exhibited a *Patent tank locomotive engine, 6[inch] cylinders*,[7] sugar cane trucks, and a passenger coach of 2ft 6in gauge, among other agricultural machinery, at the Sydney Agricultural Show of September 1885.[8]

The John Fowler works list seems to offer the following three contenders for *TOM THUMB*: B/N 4020 of 1880,

B/N 4284 of 1881, and B/N 4445 of 1882,[9] all of which are listed to Brooks & Co. However, B/N 4020 looked different except for the belly tank.[10] All had 7in diameter cylinders, while *TOM THUMB* appears to have had cylinders which were much smaller.

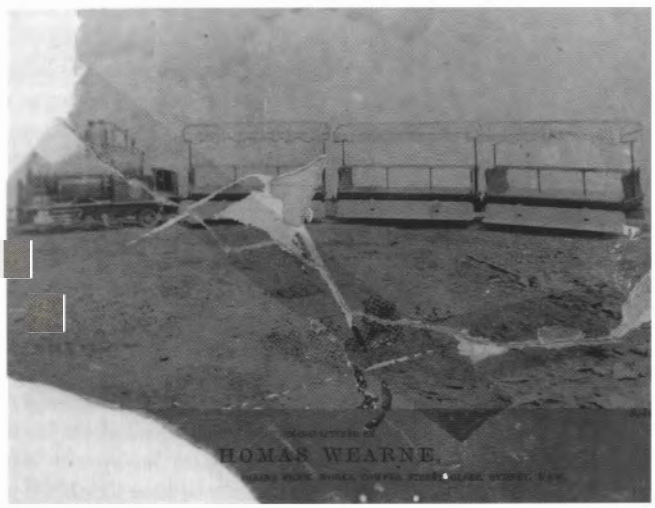
The passenger coach exhibited at the Sydney Agricultural Show, was described as: *constructed somewhat after the "Irish jaunting-car" fashion,*[11] the distinguishing feature of which was outward facing seats. Interestingly the Fowler catalogues of the period do not show a passenger car having this style of seating, though it is exemplified in the Wearne photograph. Furthermore the only recognisable John Fowler feature of *TOM THUMB* is the under-slung belly tank, while its non-Fowler practices include the curved reach rod, shape of the dome, chimney base, elliptical hole in the side frames, safety valves, forked small end of the connecting rod, circular slide bars, double slide bars that pass through the cross heads, and very small holes in the trailing bogie wheels.

There is therefore insufficient evidence to attribute to the firm of John Fowler the rolling stock at the Sir Joseph Banks Pavilion and Pleasure Gardens, Botany.

What appears to be the builder's plate on the cab side, bears the faint but distinct lettering: "...AS WEAR..." around the circumference, and: "... MAKER ..." around the inner circle, suggesting THOMAS WEARNE, the well known Sydney manufacturer of steam tram motors, tram-cars, and government railway 'J' class locomotives (that later became part of the Z28 Class). Further the photograph of the locomotive and three carriages carries the title: "MANUFACTURED BY ...HOMAS WEARNE, ...OLLING STOCK WORKS, COWPER STREET, GLEBE, SYDNEY, N.S.W." However, the quality of the 'WEARNE' builder's plate is totally out of character with the engineering standard of the rest of the locomotive, eg: lack of raised lettering, and misshapen star. The Wearne 'builder's plate' appears to have been just a painted circle cut out of sheet tin.

Thomas Wearne is known to have been trying to break into the market for small steam locomotives. As early as 1884 he was advertising: *To Colliery Owners, Sugar Planters etc. THOMAS WEARNE Builds and gives estimates for small locomotives and waggons, tip-trucks etc, of all descriptions suited to your requirements. Works: Cowper-Street Glebe, Office 386 Sussex-Street.*[12]

The image of the locomotive in the photograph of the loco and gentleman, is quite original below the level of the foot-plate, but has been extensively retouched above the foot-plate, and the background has been whited out. The other photograph has been given a title and appears to have been prepared as a publicity card for advertising purposes.



Despite its poor condition, this old publicity photo gives a reasonable view of TOM THUMB*'s left side and of the style of the carriages. The background has been painted out (as was common practice of the period) but the foreground and curve of the track would suggest the location is the line at Botany. Photo: CB Thomas collection, via Jim Longworth*

Perhaps Wearne built the *TOM THUMB* locomotive as a prototype to demonstrate the firm's capabilities, in the hope of attracting orders. Perhaps he imported the locomotive [from whom?] in the hope of attracting orders that he would then build himself. Going to the expense of preparing moulds for the cast smokebox saddle would suggest that he was anticipating a greater production run than just a one off.

The locomotive is professionally engineered, detailed, and attractively finished, with a well polished presentation, though it does display several unusual characteristics. Should we just take the publicity card at face value, and accept that Thomas Wearne did build the locomotive? Could Thomas Wearne have built it, or did he replace the original builder's plate with one of his own, as was a common practice of the period? Or did he modify the locomotive superstructure to give it his own company style? If so, then who did build *TOM THUMB*?

Conceivably the locomotive and passenger cars could have been constructed by Thomas Wearne. In January 1884 Thomas Wearne turned out his first steam tram motor, so the firm had the engineering skill and productive capacity to manufacture the *TOM THUMB*. The 'coffee pot' dome and safety valve are quite old fashioned designs for the 1884 era.

Either way, *TOM THUMB* at Botany was not Thomas Wearne's only foray into narrow gauge amusement railways. In 1887 he also built what were arguably the first roller coaster carriages in Australia, for a line located in Sydney's Belmore Park. The carriages resembled garden seats, but were much stronger, carried nine people and ran on 12in wheels, with patent grease boxes to prevent the wheel bearings from running hot. The 18in gauge line ran on an end to end principle (unlike the continuous circuits of more recent times) for 600 feet, in a circular plan, to an irregular grade, and was operated by the simple force of gravity from the loading stage that was erected 37 feet in the air. The ride lasted about 18 seconds.[13]

Acknowledgements

The contributions of the late Cedric Thomas for finding the original photographic prints in a possum infested attic of a descendant of Thomas Wearne at Bonnyrigg many years ago, the late Ken McCarthy for giving me a copy of the prints, Bruce Macdonald for engineering insight, Richard Horne for supplying the John Fowler reference, and Ron Madden for sharing his newspaper references, are all appreciated.

Further thoughts, sightings of the locomotive, comments, and suggestions for putting the lid on this can-of-worms are welcome.

References

1 *Sydney Morning Herald*. 25 December 1884.
2 *SMH*. 23 May 1887.
3 *SMH*. 27 January 1888.
4 *SMH*. 3 April 1888.
5 Radius = Circumference/2 pi.
6 STRPS. nd. *In and Around Sydney with the Steam Tram - Book 1*. The N.S.W. Steam Tram and Railway Preservation Society.
7 Illustrated in. *Light Railways*, No. 149, October 1999, page 10.
8 *Sydney Mail*. 29 August 1885.
9 Jux F. 1985. *John Fowler & Co. Locomotive Works List*. Author.
10 Illustrated in *Light Railways*, No. 125, July 1994, page 6.
11 *Sydney Mail*. 5 September 1885.
12 *SMH*. 24 September 1884.
13 *SMH*. 7 March 1887.

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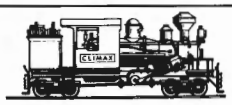

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The Red Gate Tramway to Waddamana

by Lindsay Whitham

Preamble

This paper outlines the first steps in the development of hydro-electric power from the Great Lake in the central highlands of Tasmania and the problems the developers faced in transporting men and materials to the site. In particular, it describes a 16-mile short-lived tramway constructed for the transportation of materials, equipment and personnel for the construction of the Waddamana hydro-electric power station. If during the lifetime of the tramway four people had been asked, 'Where was Red Gate?' each could well have pointed to a different location. It will be shown that each could have been correct and the four locations will be identified.

The original paper was presented to the Tasmanian Historical Research Association (THRA) meeting on 16 February 1999 and was published in their *Papers & Proceedings*, Vol. 46 No.4, December 1999. It has been revised and updated for *Light Railways*.

Brief History of the Great Lake Power Scheme, 1910-1923

On 13 January 1910 a Victorian company, Complex Ores Limited, obtained a concession from the Tasmanian Government to develop the hydro-electric power potential of the Great Lake[1]. Their proposed scheme consisted of a dam on the Shannon River at its outlet from the lake, a diversion structure on the Shannon five miles down stream and six miles of canal, headpond and pipelines leading to a power station on the banks of the Ouse River, 1100 feet below[2]. Complex Ores began excavating the canal in December 1910[3], while a subsidiary, the Hydro-Electric Power and Metallurgical Company (HE Coy), was being formed. The HE Coy started work in August 1911, with John Henry Butters as its Chief Engineer and General Manager[4]. Although a temporary cash shortage caused the company to cease work from 19 November 1912 to 1 May 1913[5], it made substantial progress on all components of the scheme. A financial crisis in London brought about by the Balkan War left the company with its orders for all its hydraulic and electrical equipment completed, but unpaid for, in England, Europe and the USA. Consequently on 1 September 1913 it put proposals to the Tasmanian Government either for a loan to the Company to enable it to complete the project, or for the purchase of the hydro-electric assets of the Company[6]. A loan was quickly ruled out and while discussions for purchase were being held, the HE Coy continued work at a much reduced rate until near the end of 1913[7]. Negotiations dragged on for a further seven months and the enabling Act was finally passed on 22 July 1914[8]. The Company continued in business to build the calcium carbide works at Electrona.

In October 1914, the Government set up a Hydro-Electric Department (HED) to complete the scheme, with Butters as its Chief Engineer and General Manager. In the meantime World War I had broken out, and the resultant delays in shipping, complicated by the confiscation of equipment en route from Switzerland through Germany, delayed the work so much that it was not until 5 May 1916, more than three years after the original Act had specified, that the two 5000hp machines in the power station were commissioned. In December 1916 the first extension, a 8000hp unit for which

Two loaded trams pause at the foot of the 1 in 11 incline. *Photo: Archives Office of Tasmania*

A tram on the curved viaduct between the summit and the 'Y'. *Photo:Hydro Electric Corporation*

provisions had already been made, was authorised. This unit came into service on 18 November 1919 and over the next three years, a further six 8000hp sets were installed and augmented civil engineering works were carried out. Work began slowly but built up after the end of the war and the expanded power plant at Waddamana was 'switched on' at a ceremony on 18 January 1923[9].

Nomenclature of the Red Gate Area

To interpret the printed and written material of the time, such as the Bothwell Council Minutes, newspapers, Parliamentary Papers, Public Works Department (PWD), HE Coy and HED correspondence and reports, some explanation of local nomenclature is essential.

◆ The road between Bothwell and Great Lake, now part of the Lake Highway, was known as the Great Lake Road.

◆ The road which the present Waddamana Road follows to a point about half-a-mile beyond the Shannon River bridge was known officially as the Lake Echo Road, because from there it continued, to cross the Ouse River and head for the northern end of Lake Echo; for the next four and a half miles of little better than a cart track it was known as the Jean Banks Road. Note that the present Jean Banks Road extends only about a mile from its junction with the Waddamana Road.

◆ The portion of the road to Hermitage was also called Hermitage Road, Synnot's Lane or even the Ouse Road and Jean Banks Road.

◆ For brevity I shall refer to the junction of the Waddamana Road and Lake Highway as the Waddamana Turn Off (WTO), although this is an obvious anachronism until 1919. In correspondence between the PWD and the Hydro-Electric Commission on the maintenance of the Waddamana Road after World War 2, this point is referred to as Red Gate.

◆ The HE Coy and HED staff appear to have used the name Hunterston for the locality as well as the property of that name.

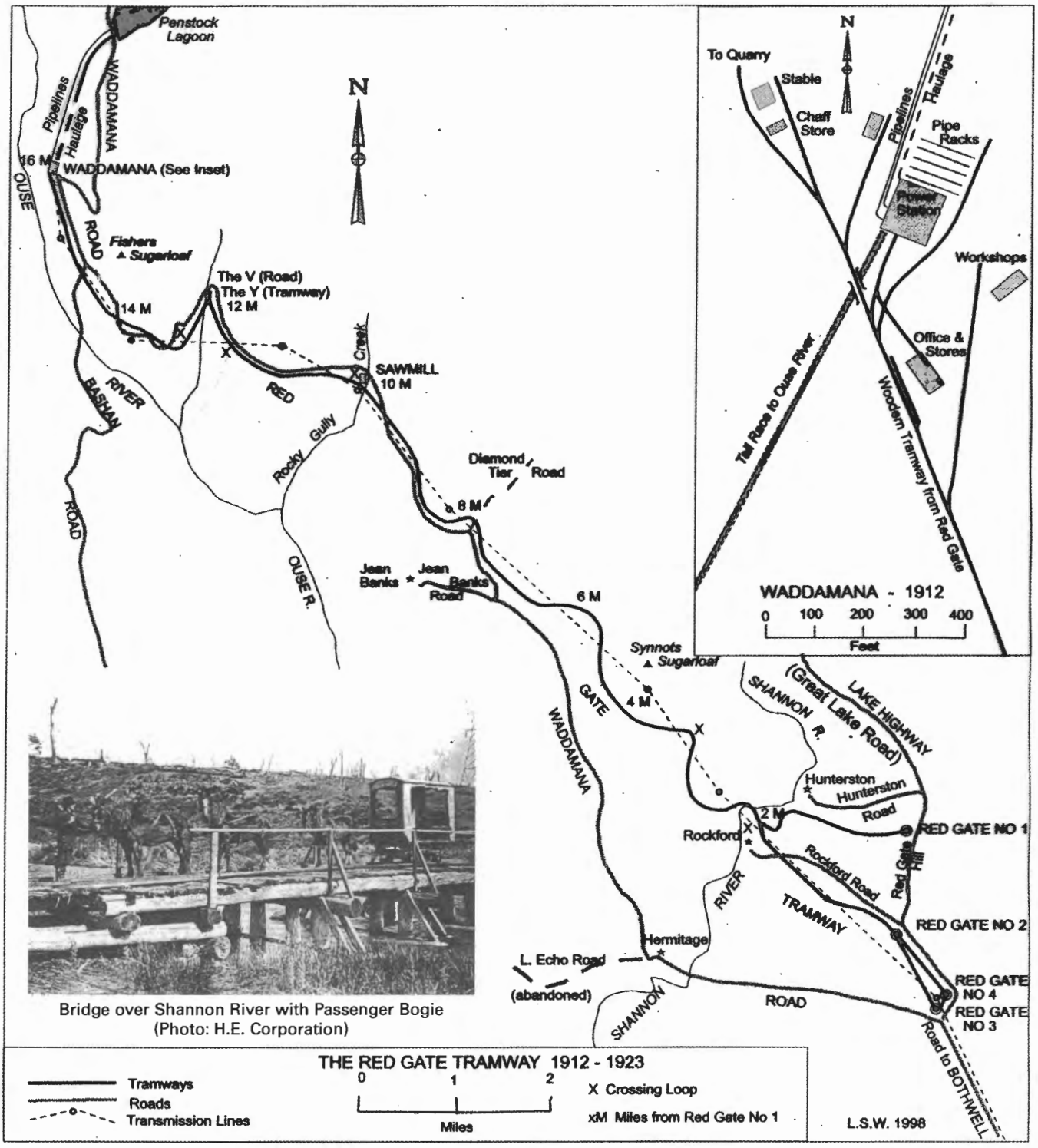
◆ The first mention of Waddamana in the daily press was on 15 August 1913. Previously the area was just 'the power house site'

◆ Red Gate Hill. In the absence of a local or official name for the two and a half mile climb from the WTO to the saddle just before the Hunterston Road junction, I propose to call it Red Gate Hill, for reasons which will become apparent.

Why a Tramway to Waddamana?

At the time the power scheme was authorised, there was no good road within some ten miles of the power station site, which was about fourteen miles northwest of the Waddamana turn off. Complex Ores already had access through Wihareja to the Shannon diversion point and from there they built a road of sorts along the canal route and down the hill to the power station site. It would have been feasible to have carted all the pipes and station equipment by this route but it was twice as long as a direct route and the Great Lake Road would not have stood up to the heavy traffic. The Bothwell Council claimed that in 1909 its roads were a credit to the Municipality, but the unpalatable truth, as pointed out on numerous occasions by Butters[10], was that they had not been provided with a proper base course.

Consequently after a few months of construction traffic, much of the Great Lake Road beyond Bothwell became 'to a large measure impassable' with long patches of axle-deep mud. The HE Coy therefore decided to construct a tramway starting near the WTO to transport all its material and equipment to the power station. In a letter submitted to the Council on 2 December 1911, the company sought permission to lay its construction tramway along part of the road to Jean Banks, 'the object of the tramway being to prevent demolishing of the roads from Hunterston on to the Great Lake'. After the Overseer had reported that he had inspected the route and 'found that it would not interfere with traffic in any way and could do no possible harm to anyone', the Council gave its approval[11]. The power scheme had virtually been designed in time for the presentation of evidence for the Complex Ores Bill in 1909 and Butters, while working for consulting engineers in Melbourne had examined the whole site thoroughly while preparing a report on the proposal. Thus when he transferred to the HE Coy, he was thoroughly conversant with the scheme and the area, and both he and the Directors were confident that the completion date of 13 January 1913 could still be met[12]. The choice of a tramway with wooden rails rather than steel would have been based on factors such as the short construction period planned; the low initial cost; the ready availability in Tasmania of the techniques and labour for constructing and operating a heavy duty wooden tramway; and the ample supply of suitable timber on site along the proposed transmission line corridor between the power station and the WTO.



Bridge over Shannon River with Passenger Bogie
(Photo: H.E. Corporation)

Tramway Route

The 3ft 6in gauge single track tramway was kept within or close to the transmission line clearing wherever practicable, with deviations only as dictated by the terrain. Accordingly, the original proposal to start at the WTO and head towards Hermitage was abandoned and the first six miles were relocated to put the line closer to the transmission line for another four miles and to place the terminus near the crest of Red Gate Hill, two and a half miles northwards. (There are now three transmission lines but to avoid congestion on the accompanying sketch map, only the 1916 line, the central one, is shown.) Stables, stores and gantries were erected at the terminus and to assist carters in finding the tram the company's depot gate was painted red to distinguish it from the dozens of other gates along and across the road from Bothwell; hence the name Red Gate, as shown on the company's plan.

This diagrammatic plan of the line showed mileages to significant features such as six crossing loops, the Shannon River bridge, major changes of grade, their sawmill and a switch-back (or 'Y'). No elevations were given and as the line followed the surface, grades quoted were approximate averages only, the steepest being, against the load, 1 in 18 on the two-mile climb out of the Shannon valley, with the load 1 in 14 from the summit of the line to the 'Y' and 1 in 11 down the gully below the 'Y'. At the power station there were branches to stores, chaff house, stables, pipe racks, and into the station itself, to place a truck under the crane, with the layout being altered and expanded as the job progressed[13]. The high-pressure ('hillside') pipes were stored on racks behind the power station, then, along with massive valves, concrete, reinforcing steel etc, were winched up a haulage and moved sideways into place. Likewise all the material for the low-pressure ('hilltop') woodstave pipes and the outlet works at Penstock Lagoon were winched up the haulage and transferred to a mile-long wooden tramway.

Construction

Where the ground had negligible cross-fall, a continuous mat of sleepers was laid directly on it, except in the improved pasture at Rockford where a shallow trench was excavated to keep the rails at ground level. In sidling, either a bank was excavated in earth or the outer end of the sleepers was supported on a bedlog in rocky country. Where the sideslope was too steep for only one bedlog, short piles were used, in contrast to the normal timber-tram method of pigstying. On-site inspections have revealed no embankments other than small ones at bridge abutments and only one significant length of box cutting, near the 3-mile peg. There were seventeen bridges: those over streams and watercourses and a number of piled viaducts over rocky gullies. The three largest were those over the Shannon River (100ft long x 9ft high), Rocky Gully Creek near the 10-mile peg (200ft x 7ft) and a curved viaduct at the 12-mile peg near the 'Y' (230ft x 13ft)[14].

A sawmill, camp and stables were set up in December 1911 near Rocky Gully Creek in a densely forested section of the planned transmission line clearing. Advertisements offering wages of 8s to 10s per day for tramway-builders and axemen were placed in daily papers in January and February 1912[15]. Both round and split sleepers were obtained as close as possible to their final position but all the rails (five by fours) were sawn at the mill. Although it is not specifically stated, the rails would have been secured to the sleepers by the usual means of square dowels in augured holes.

Construction started at the sawmill and proceeded in both directions from there. By 30 May the formation was complete, the Shannon River bridge was finished, 'a mile or so' of rails still remained to be laid, and the mill was working ten hours a day to complete the cutting of rails. The first two loads were taken from the Red Gate to Waddamana on 13 June[16], but only three weeks later, in the bitterest winter for years, the tramway was blocked for severa1 days by snowdrifts up to three feet deep. The *Mercury's* Special Correspondent

The tramway under construction near the 2-mile peg. This section was abandoned a few months later. *Photo: Hydro Electric Corporation*

was waiting at Red Gate for transport to Waddamana when: *The tramway train came into view. It consisted of bogies, each drawn by four horses, coming slowly and painfully through the snow clad valley, the drivers walking alongside, for all the world like the pictures one sees of dog trains in the polar regions*[17].

Immediately after the severe winter of 1912 which had contributed to the destruction of sections of the Great Lake Road, the two and a quarter miles of tramline from Red Gate No. 1 (author's numbers) to the Shannon River were abandoned and relocated, mainly within the transmission line corridor. The new terminus, Red Gate No. 2, was adjacent to the present entrance to Rockford and saved a climb of 215 feet up one mile of Red Gate Hill[18]. The large two-storey store at Red Gate No 1 was dismantled and moved to Red Gate No. 2 where it remained until about 1950[19].

Operation by the Hydro-Electric Power & Metallurgical Company, 1912-13

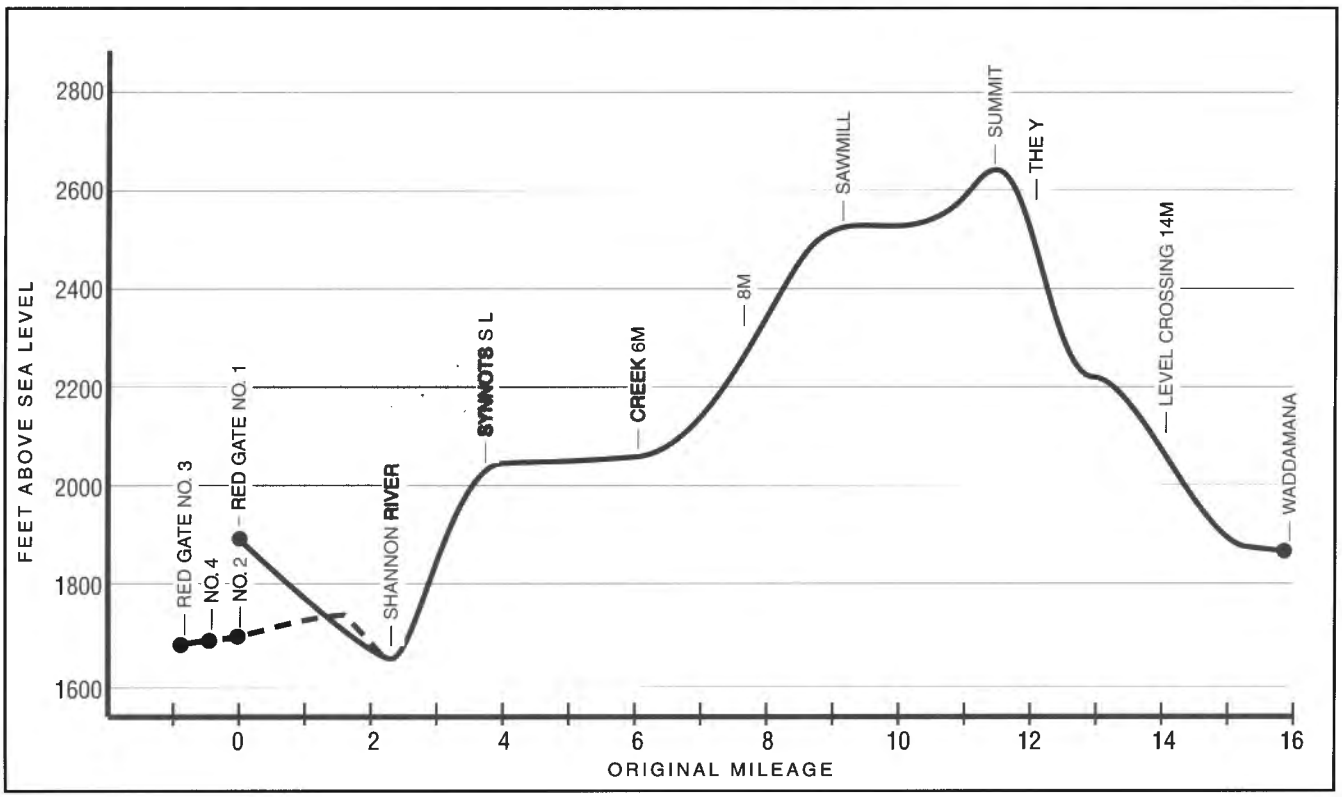
No figures are avai1able for the total tonnage of material carried over the tramway during the HE Coy era, but it would have amounted to several thousand tons as it included all the high-pressure steel pipes, the staves and bands for the hilltop pipeline, the structural steel for the power house framework as well as cement, reinforcing steel, food supplies for both men and horses and all the miscellaneous gear required for a construction site[20]. All loads were carried on trucks comprising a frame sitting on two bogies, both of which were provided with brakes, essential on the steep grades. It has been reported that as a general rule one horse was required per ton of load and that 'eight heavy horses' were needed to move each of the 20ft long steel pipes[21]. The loaded trucks were taken to about the half-way mark where the horses were rested overnight before completing the journey to the power station the next day.

Although tenders were called for the transport of loads from one to ten tons from Hobart and Apsley to the tram terminus, it appears that the company itself operated the tramway[22]. Passengers were carried in primitive carriages consisting of wooden seats on a single unsprung bogie, initially without any protection from the weather but later with an embryonic canvas shelter. Up to four horses were used to haul the passenger 'bogies', presumably for speed rather than weight. Under favourable conditions these passenger vehicles could do the trip in three to four hours. In bad weather or heavy snow, the trip took longer, if it could be made at all.

Operation by the Hydro-Electric Department: Oct. 1914-May 1916

The newly-formed Department took over the company's tramway, unused and neglected for almost a year, with the prospect of moving all the heaviest items-turbines, alternators, valves and transformers-in the winter of 1915. Butters' experience while with the HE Coy prompted him to take action on three fronts: putting the existing line into good order, extending it at the southern end and seeking permission from the Bothwell Council to extend the tramway right back to Bothwell, within the road reservation[23].

Restoring the existing line involved extensive re-railing, general repairs and strengthening the line for the heavier loads and its use then kept a small gang of men continuously engaged on maintenance for the duration of the heavy lifts. More stables were erected at the power station and along the line to house the extra horses required to move the expected heavy traffic in the time available. The sawmill, relocated to Waddamana, was kept busy until March 1915 cutting the rails for the re-railing and for a one and a quarter mile extension from Red Gate No. 2 to 'the junction of the Great Lake and Ouse Roads' (Red Gate No. 3), built in order 'to make it certain that the heavy loads could be delivered at all'. Shear-legs were erected at Red Gate No. 3 in May to facilitate the transfer of heavy items from road vehicles to new, stronger tram trucks. The whole length of the tramway, now eighteen miles (29km), was 'metalled'[24]. From photographs and site evidence it can be deduced that metalling consisted of placing a layer of earth and stones on top of the sleepers, and



The 'Y' at the 12-mile point. Gradients were 1 in 14 on the right and 1 in 11 on the left. *Photo: Hydro Electric Corporation*

only between the rails, to provide a more even pavement for the horses. The Bothwell Council unanimously rejected the request for the tramway to Bothwell in the road reservation but doubtless the fact that the HED had even proposed it, jolted the Council and Public Works Department into repairing and strengthening the Great Lake Road.

For the first few months the Department operated the tramway itself, before contracting out routine cartage to Harry Batt of Bothwell. This contract was later transferred to the well-known Dunkley Bros. of Zeehan to include heavy haulage[25]. The first heavy lifts, the 13½ ton alternator rotor hubs and the two 58ft long crane beams, were taken in to the station in mid-June 1915. They were followed about three months later by six transformers, 'rather awkward articles to handle', weighing up to 15 tons apiece[26].

The only figure available for the tonnage carried by the tramway for this period is for 600 tons of the heavy lifts. With its initial major task of cutting the tramway rails completed, the sawmill was closed down temporarily in July. The Marshall steam engine was moved into the powerhouse to drive one of the main exciters to provide power for the station crane[27]. With the switching-on ceremony on 5 May 1916 the horse-drawn wooden tramway had fulfilled its principal purpose, four years after its completion.

The Waddamna Road, 1917-19

Under pressure from the HED for better access to the established village and speedier access to the northern section of the transmission line, and from the Hobart Chamber of Commerce and others for access for tourists, Parliament voted money for a light duty road at the end of 1916[28]. John Butters emphasised that heavy loads would still use the tramline.

The proposal was for reconstruction of four miles of the Lake Echo Road and ten miles of new road 'via Jean Banks Road'. Progress was so slow that in his 1916-17 Annual Report Butters made a plea on behalf of the staff at Waddamana, stressing the need for quicker access in the event of medical emergencies. He cited two cases where wives of members of staff reached the main road, where a motor-car was waiting for them, only just in time to 'narrowly avert serious results'. No doubt the teamster did not relish the prospect of being called upon to perform the duties of midwife!

Six months later a Parliamentary committee investigating a serious over-run of costs reported that the residents were discontented because of lack of suitable transport. The tramway, they said, was slow, subject to closure by snow for weeks at a time, unsafe for passengers and *utterly unfit for the conveyance of sick persons*[29].

The PWD pegged out the new section of road without consulting the HED, and so it was only by chance that Butters discovered that the road was to go through the Jean Banks homestead area, which was too remote from the transmission line for quick access. In response to his protest some three and a half miles of road were relocated nearer to the power line[30]. There were three level crossings over the tramline: one three-quarters of a mile before the sawmill site, the others on the serpentine section leading down to the Ouse River flats.

The road finally reached Waddamana in late 1919 or early 1920, three years in the making and costing more than three times the original estimate. Although only a single lane road for light motor traffic it brought to an end the sense of isolation felt by the people of Waddamana. Nevertheless the tram still carried some passengers until early 1923, since few of the staff could afford the luxury of a car at that time.

Operation by the Hydro-Electric Department: May 1916-Jan 1923

Traffic to the end of 1919 was light, as it was associated with an established village and the drawn-out installation of the third machine hampered by war-time shortages. The tramway did not rate a mention in the HED Reports for 1917-18 and 1918-19 and it is probable that the works listed in the 1919-20 Report were carried out in 1920 after it became evident that rapid progress could be expected. Hence it was refreshing to find an unofficial account of a visit to Waddamana in November 1919 by a party including the Governor of Tasmania, the Governor of the Commonwealth Bank and JH Butters, to 'switch-on' the third generating set. This account was useful for three reasons: it gave the only readily available reference to the date of the 'switching-on', the only published reference to progress on the Waddamana Road, admittedly vague, and a delightful insight into the working of the tramway.

The party, having been served refreshment at Ratho, Bothwell, drove along the new road beyond the Jean Banks turn-off until the unfinished pavement was too rough for the notoriously thin tyres of those days. The 'top brass' completed the journey on horseback, leaving the writer and others and the entire luggage to travel by the tramway. When the tram met an outward-bound laden goods truck, their driver used an unconventional method of effecting a crossing: instead of returning to the nearest loop he unloaded the passengers and luggage, pulled the bogie off the line to let the loaded truck pass and then, with all hands helping, re-railed and re-loaded the vehicle. But despite the best efforts of the driver making full use of 'his good lungs, absolutely necessary to urge the horses onward', the ceremony was almost over when they arrived[31].

In 1919-20 an extension of one mile was laid on the edge of the road reservation from Red Gate No. 2 to a new depot at Red Gate No. 4, where the present Lake Highway widens out opposite the entrance to the Red Gate (Stock) Accommodation Paddock. A ladies' waiting-room, petrol store and chaff store were built there and shortly afterwards, this extension was pushed on to Red Gate No. 3, thereby forming a mile-and-a-quarter long loop, making a total length of twenty miles (32km) of tramway. Dunkleys, again the successful tenderers for the heavy cartage and this time responsible for the maintenance of the tramway as well, carried some 1700 tons of material to Waddamana.

In 1920-21 more buildings were erected at Red Gate No. 4 and despite delays occasioned by the destruction of 65 chains of tramway by bushfires, some 7600 tons were moved. In November 1920 a party of Parliamentarians en-route to Miena reported seeing the dispatch of the 'daily expresses' from Red Gate - seven-horse teams pulling bogies laden with all sorts of goods for camps and works - and on the return journey from Waddamana motoring on the new road via the Hermitage and Red Gate, opened a few months ago[32]. In the last report in which the tramway is mentioned, 1921-22, it was stated that the tramway had been kept in good repair and that 6624 tons had been shifted[33].

An unusual item of freight in this period was sand for making concrete. In the first stage sand had been washed from local river gravels, but for the larger quantities now required sand was quarried from a pit near Red Gate No 3 and bagged for transport by tram[34].

After the commissioning of the extensions to the power scheme in January 1923 the tramway was rarely used and gradually fell into disrepair.

At its busiest the line carried 65 tons per day[35], with 135 horses 'on the job'[36], from 16 to 18 horses being used to haul the massive transformers. Over the life of the tramway a number of horses, seriously hurt when they were overrun by trucks on downgrades, had to be shot. It is said that those horses that learned to jump off the track survived! On the very steep grades the horses were unhitched to walk behind as the trucks ran down on the brakes.

Conclusion

From a comparison of the reported tramway loading with figures for the tonnage of inward goods by rail to Apsley, 1910-1924, it may be deduced that the Red Gate tram carried at least 25,000 tons of freight to Waddamana. That all the machinery was delivered without damage is a tribute to the skill of the construction and maintenance workforce and of the teamsters.

All trace of Red Gate No.1 had disappeared by the early 1920s, though the small store/stable must have survived there for a few years, giving the name 'Hut Run' to the north-east corner of Rockford. Of the buildings along the line only

Passenger 'bogie' at Waddamana, circa 1916, before the addition of the shelter. *Photo:Hydro Electric Corporation*

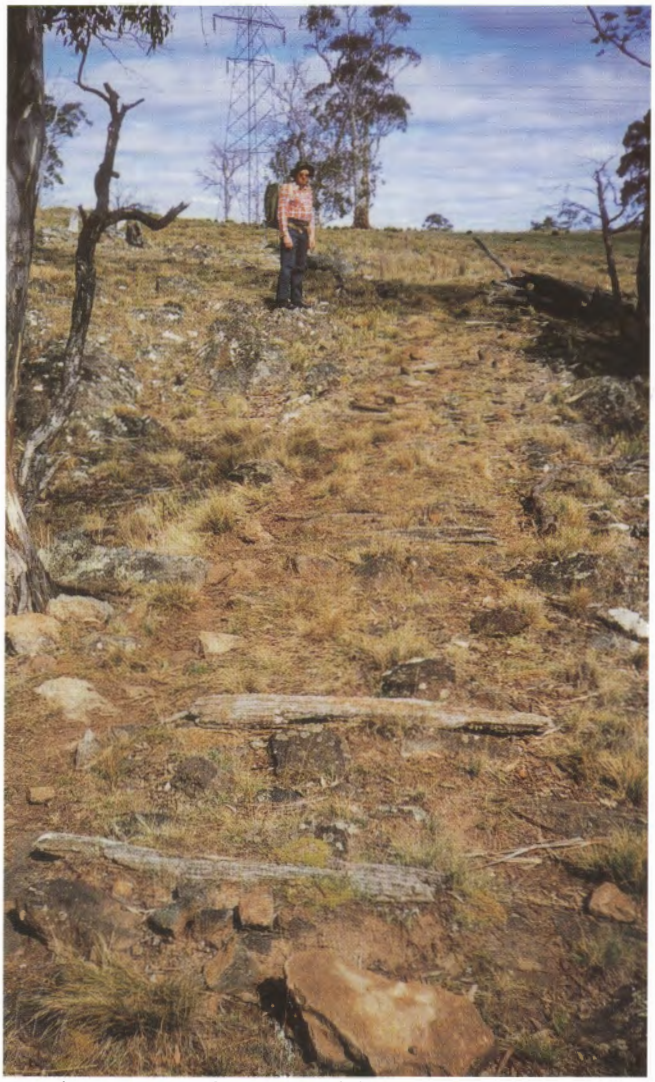
one, a hut, possibly a patrolman's, still stands on the right bank of the Shannon River close to the tramway bridge site. Some 13 miles of the formation may be traced without undue difficulty, and a few holding-down bolts of the Shannon Bridge and some piers of the curved viaduct near the 'Y' survive. The sawmill site, used for many years as a picnic ground ('The Mill') by the staff at Waddamana and Shannon is now a grassy flat dignified by the classification of Recreation Reserve.

It was noted on 5 November 1999 that the transmission line shown on the map (the centre one) has been completely demolished from Waddamana to the Lake Highway, and that demolition from there to Bothwell is proceeding. The two outer lines remain in service and still provide a guide to the location of the tramway.

During its working life the tramway was referred to in the press and official documents simply as the 'horse tram' or 'wooden tram', the name 'Red Gate Wood Tram' appearing only once, in the 1920-21 HED Report. The name 'Red Gate Tram' was not used until many years later.

Acknowledgments

I am grateful to the many people, especially former employees of the HE Commission, members of the staff of the Hydro-Electric Corporation, residents of Bothwell and my bushwalking companions, who have willingly helped me gather information for this paper.



The formation near the crossing of the transmission lines, at about 5½ miles, September 1997. *Photo: Lindsay Whitham*

The piers of the curved viaduct still standing, January 2000, with the author propping them up. *Photo: Bob Wyatt*

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Newly restored Malcolm Moore 1039 poses at the 'middle station'. The steep gradients of the line are quite apparent. Photo: Andrew Forbes

Rebuilding Malcolm Moore 1039

by Andrew Forbes

Negotiations to purchase 2ft gauge Malcolm Moore 4wDM 1039 for the Kerrisdale Mountain Railway in Victoria commenced in mid 1998 with the management of Mourilyan sugar mill in far north Queensland. The sale was completed in mid-December 1998. The locomotive plus a pair of wheelsets and a reversing final drive gearbox were loaded onto a truck for the long trek to Kerrisdale, arriving on Boxing Day 1998. The photographs supplied during the course of negotiations showed a grubby and somewhat tired looking old loco. However, we were assured that it was a "goer"! We imagined that all it needed was a grease and oil change and fitting with a new battery, but after having carried out these tasks the fun began in earnest. In fact a heavy general overhaul was needed.

Wheel hubs and axles

The first thing we noticed was that despite lubrication the wheel hubs were as dry as a "wooden god". With great difficulty we shunted the loco through the loco shed and onto the siding to await further inspection. The next day we lifted the loco off its axles and found that the hubs were worn out and the underkeeps had dried up. The grease we had been pumping in had gone around the shells and not onto the journal! The hubs were rebuilt and side thrust wafers were made to take up the 15mm sideways slop, then repacked with grease and fitted up again. The original maker's instruction was to oil the hubs. However, this method would also oil the wheels and brake blocks as there is no method of retaining the oil on the parallel shaft.

Engine and gearbox

The diesel engine refused to start and taxed the battery very heavily. The starter motor was later found to be in need of an overhaul whilst the engine had water in No.3 cylinder, a bent push rod, and a blown head gasket, plus a few other complications caused by sitting idle for so long with water in the cylinder.

The engine and gearbox were removed and completely rebuilt. Whilst these items were out of the chassis and we were cleaning the layers of dirt mixed with oil and bagasse, we discovered the number 1039 painted in white lead on the underside of the gearbox support cross member. This we assumed to be the builder's number. However, to confuse the issue the gear sprocket cover plate had painted on it 'gear cover loco 1035'. As Malcolm Moore 1035 is at Woodford in Queensland, we will have to put this down to random fit up in production or other misadventure.

Chassis

The loco has a rolling chassis, a sub-chassis, and an angle iron framed superstructure. All three needed to have badly rusted sections cut out and replaced before they could be painted. It would appear that the locomotive was parked in an open door or near a broken downpipe as the rust was fortunately concentrated in one front corner.

Once the rolling chassis was fully overhauled, we were able to start to trial fit the sub-chassis and cab superstructure. At some stage the locomotive had suffered a severe rear end shunt or crash (maybe the infamous Rat Shed incident - see LR 141 p.11). The fuel tank was found to have several leaks and was stoved in beyond repair, whilst the original Malcolm Moore pressed panels were missing as were the makers plates. A new fuel tank was fabricated and new sheetmetal covers to

A view of the cab, showing 1039's restored and augmented controls.
Photo: Andrew Forbes

the fuel tank and a tool box were manufactured. We borrowed a plate from the Puffing Billy Museum and had two replicas cast. These were duly painted and applied to the finished locomotive in due course. Several sections of the sheetmetal cladding had to be cut out and replaced as again the water playing on the front had taken its toll.

Livery

The various liveries that the locomotive had worn were revealed during the strip back to bare metal of all the panels. The first colour scheme was of course khaki over red lead. The next I would describe as "Macknade blue" with yellow lining. Next was "Moreton green" with cream lining, then bright yellow with magenta lining and the number 10 painted onto the font side of the locomotive. Finally of course as we received it in yellow, black, red and white, the colour scheme it is now resplendent in.

Braking

During restoration it was apparent that the braking system was designed only for static purposes and that something better would be required to stop the loco and train on our grades, the steepest of which is 1 in 12.5. A standard "KMR" screw brake pedestal was adopted to replace the ratchet and lever system. This can easily be applied with the left hand, and works well in service. Further, a track shoe brake was designed and incorporated using the same "KMR" screw type system through levers and bell cranks down to the red gum shoes mounted on a cross shaft centrally between the axles. This system allows us the whole weight of the locomotive to be available upon a substantial pair of shoes acting directly on the rail. Thus with the braking systems and the diesel engine retardation through the gears we have a very manageable locomotive.

1039 prepares to push a set of converted ex-Smithfield points up to the 'middle station'. *Photo: Andrew Forbes*

Completing the overhaul

Having now attended to all the mechanical requirements of the heavy general overhaul we were satisfied that we should now attend to the cosmetic details prior to repainting as earlier described. The original roof had been replaced with a "tropical special" at some stage which was far larger than the original. We decided to maintain the line of this roof as it is close to the original, but reduce its width by 250mm to bring it back more in proportion to the original locomotive outline. Whilst we were working on the roof and its frame we took the opportunity to remove some unsightly superstructure that had been welded around the rear of the locomotive and return it to its original type of bracing. The bonnet covers of the

The restored Malcolm Moore. locomotive, with new brake equipment prominent *Photo: Andrew Forbes*

locomotive had flown off on the way down from Innisfail so we didn't have to agonise over what to do about their battered state. A new pair was duly pressed up and fitted to a central hinge arrangement.

The trial fit up, strip down and painting of the locomotive took three weeks. Now on Boxing Day 1999, exactly one year after arriving at the Kerrisdale Mountain Railway, our new number 2 locomotive was ready to trial. Having fuelled, oiled and greased during fit up, we were delighted that the engine started first press of the button. The first job for *MAL* was to push a converted set of points ex Smithfield Armaments Depot, South Australia, up to "middle station" for the siding and so on with the tracklaying after a twelve month hiatus.

MAL has proved to be an excellent performer, rides well and is very surefooted. Having suffered the ignominy of being number 5 at Mourilyan Mill for some time, we hope that Malcolm Moore 1039, KMR No.2, will, now that it is restored, be a thing of joy forever.

Industrial Railway News Editor : John Browning
PO Box 5646, Rockhampton Mail Centre, Qld 4702
Phone: (07) 4931 3684 (W); (07) 4926 6356 (A/H)
Fax: (07) 4927 7560 E-mail: ceo8@rocknet.net.au

NEW SOUTH WALES

BHP LTD, Newcastle

(see LR 157 p.18)
1435mm & 915mm gauges
On 8 February, standard gauge Goninan Bo-Bo DE BHP32 (1 of 1954) was noted being worked on with scaffolding around it. It seems it must have been receiving attention before movement to Richmond Vale Railway Museum.
The next day, Goninan Bo-Bo DE BHP50 (014 of 1961) was noted on a low loader heading west near Mt Thorley The escort vehicle seemed to be from Western Australia. It has been rumoured that Loongana Lime at Parkeston, WA (see LR 155 p.21), had purchased one of these locomotives.
Response to a newspaper advertisement revealed that up to 23 3ft gauge flat top cars from the steelworks are for sale and stored at Mayfield. Anyone interested should contact Norm on 0419 438 233.
"Jumboman" 2/01 (LocoShed internet discussion group); LS "Tony" 2/01; Wes Sutton 2/01; (both Ausloco internet discussion group); *The Newcastle Herald* 30/12/00 via David Mottram.

BHP Ltd, Port Kembla

(see LR 157
1435mm gauge
It is understood that the four 442 class locomotives hired from Silverton went back to Sydney on 6 January. Ex Goldsworthy Mining English Electric (Aust) Co-Co DE D50 (A.111 of 1965) had been noted the previous day on test in preparation for its return to service.
English Electric (Aust) Co-Co DE D46 (A.132 of 1966) was noted removed from its temporary bogies on 7 February and with its engine and generator gone. This unit has never been placed in service at Port Kembla. On the same day, English Electric (Aust) Co-Co DE D49 (A.242 of 1972) was in the workshops under repair after having the main generator damaged by fire.
It is suggested that English Electric (Aus) Bo-Bo DE D30 (A.084 of 1964), out of service for a number of years, will be overhauled by an outside contractor and returned to service.
English Electric (Aust) B-B DE locomotives D20 (A.041), D21 (A.041) & D24 (A.037), all built in 1960, are out of use and set aside for the State Mine Museum, Lithgow. It is understood that D24 will be stripped for spare parts and the other two locomotives will be transferred to Lithgow soon.
John Martin 1/01 (Ausloco internet discussion group); Chris Stratton 1/01 & 2/02; Brad Peadon 1/01 (both LocoShed internet discussion group)

CRT BULK HAULAGE PTY LTD, Yennora

(see LR 154 p.18)
1435mm gauge
A visit on 16 February revealed neither Walkers B-B DH 73-class locomotive in use. 7334 *HALLEYS COMET* (696 of 1972) was stored under an awning towards the western end of the yard, missing its radiator and some engine doors. 7322 (684 of 1972) was stored in the open nearby, also missing its radiator as well as its side panels. 4wDH X216 (NSWGR Chullora 19 of 1968) is also stored out of use here and its hood covers were on the ground near 7334. 4wDH X209 *KELLY'S CRUISER* (NSWGR Chullora 12 of 1967) was the only operable locomotive.
Chris Walters 2/01 (LocoShed internet discussion group)

EDI RAIL, Cardiff

1435mm gauge
After several attempts to despatch it from Melbourne, Clyde Bo-Bo DE Y134 (65-400 of 1965) finally arrived at Cardiff workshops, having been noted in transit on the Hume Highway on 15 January. A few electrical problems had to be sorted out to get the unit ready for service
Julian Insall 1/01; Michael Gray 1/01 (LocoShed internet discussion group)

A GONINAN LTD, Broadmeadow

(see LR 156 p.18)
1435mm gauge
The yellow Coles diesel crane is reported to have been at Broadmeadow since it replaced a Thomas Smith steam crane sometime around 1970. While it was used for a variety of lifting and moving tasks around the plant in its early years, it was increasingly used for shunting electric passenger car sets, freight wagons and locos within the

BHP Port Kembla's English Electric (Aust) Bo-Bo DE D43 (A.271 of 1974) has retained its red livery for many years and is seen here at Waters Siding on 2 December 2000 preparing to head the first of two staff Christmas trips to Kemira. *Photo: Brad Peadon*

plant and across Broadmeadow Road between the two entrance roads into the plant. From the closure of the foundry in the mid 1980's and the gradual demise of the heavy general engineering section this became its only regular use. It disappeared for a period of time around 1995-97 period and reappeared minus its crane jib.
It is understood that there are also two "Trackmobile" road-rail units at the Goninan works. The larger one is unable to handle a full a four car set, while the smaller one is (or was) used for positioning single cars in the test bay for weighing on the load cells.
Jeff Mullier 1/01

GRAINCORP LTD, Carrington Bulk Grain Terminal
(see LRN 155 p.16)
1435mm gauge
The identity of the remotely-controlled shunting units reported here has been established. There are only two of them and they are 4-wheel battery electric units. They were built by Vollert Gmbh & Co KG, Weisnberg, Germany in 1980. Builder's records detail them as being ordered by the Grain Elevators Board, Sydney. The locomotives are designated Model 11EL and were both allocated the same builder's number, 800/008. They are identified locally as "red Vollert" and "blue Vollert" and bear a painted a triangle of the appropriate colour.
Brad Peadon 1/01 & 2/01; Jens Merte 1/01

NEWCASTLE WALLSEND COAL CO PTY LTD, Ellalong Colliery
(see LRN 121 p.10)
1067mm gauge
It is believed that this company is now a subsidiary of Gympie Gold, and that the mine is also known as "Southland", the name of a holding company. The contractors responsible for operating the mine are believed to have gone into receivership in January and the workforce laid off. The mine owners were reportedly looking for new operators. Reports published elsewhere that DBT Australia (formerly Westfalia / Mine Technik) were building a new rack locomotive for this colliery are incorrect. All three rack locomotives listed in LRN 121 are in storage, presumably at the mine, and the two Fox locomotives are still inoperative at the base of the test incline there.
Daven Walters 1/01; Jeff Mullier 1/01; John Shoebridge 1/01 (Ausloco internet discussion group); David Jehan 1/01

Industrial Railway NEWS

POWERCOAL PTY LTD, Angus Place Colliery
(see LRN 72 p.8)
1067mm gauge
A visit to this colliery on 14 August 2000 revealed four locomotives and two personnel cars. Hexham Engineering 4wDH DL2 (HE659) was noted on use on the surface while E M Baldwin 4wDH 67 (9389-1-5-81 of 1981) was stripped and derelict.
Vale 4wBE BL08 was noted in the running shed on charge while another one, possibly numbered D61, was also seen and is used on the surface only.
Gemco 4wBER personnel cars noted were numbered PC34, which came up from underground, and a similar unit numbered PC17, which was sent underground to replace it.
Other locomotives were said to be numbered 9, 10 & 11 underground, and 70, believed to be away for repairs.
Ray Graf 1/01

Locomotive, Rolling Stock & Equipment Manufacturers

TESCORP HYDRAULICS PTY LTD, Cairns
(see LR 157 p.18)
Further information is to hand regarding the rail equipment currently in use for the installation of underground power cable in Auckland, New Zealand. The track gauge being used is 750mm and the rails are 10Kg/m. The haulage vehicle is powered by a Perkins 3.152 diesel engine (28 Kw) driving the rubber wheels via four hydraulic wheel motors with variable speed and traction force control via a PLC unit. Top speed is 5 Km/hr and the maximum drawbar pull is 3000 Kg.
The haulage unit and its towed conveyor wagon have retractable double flanged guide wheels set at 750mm gauge. The cable trolleys are tiny cradle units guided on a single railhead, each with an outrigger wheel running on the concrete tunnel floor between the rails. Turntable equipment is used to transfer these trolleys from one rail to the other.
The photographs show the principles of the system. Photo 1 (right) shows the turntable placed across the rails to transfer the empty trolleys from one rail to the other and feed them under the power cable as it is pulled from a drum by the traction vehicle. The vehicle raises its guide wheels over the empty trolleys and guides itself with lowered wheels on the cable side. When the full length of cable

is paid out onto its train of trolleys, the "locomotive" pulls it to the desired position along the tunnel, propelling its conveyor wagon. The haulage vehicle and conveyor wagon are seen in photo 2 (left) with the nearside rail guide wheels retracted. On reaching its destination, the guide wheel configuration is changed enabling the traction unit to reverse over the stationary trolleys and plough the cable up onto brackets on the tunnel wall with the help of the conveyor wagon.
By the start of the year, about a third of the approximate 100Km of cable had been laid beneath Auckland. The system was working above design criteria and the work completion date had been brought forward.
Martin Benson (Tescorp Hydraulics Project Engineer) 1/01

Industrial Railway NEWS

QUEENSLAND

RELICS UNCOVERED AT CHILDERS

68 years after the closure of The Colonial Sugar Refining Company's Childers Mill at Huxley, some interesting relics have been uncovered at the old mil site.

While slashing a track through a grass-covered area near where the blacksmith's shop had been, the owner of the property encountered a steel object protruding a few centimetres above the ground. Efforts to lever the piece of metal out by hand failed but curiosity took over and excavation with a backhoe followed. Three locomotive fire-boxes were uncovered, as well as a smokebox and part of a spark arrestor chimney. These objects were most likely buried during the period of the mill's operation, between 1894 and 1932, although the mill area was used as a locomotive depot by Isis Mill for many years after. Three Fowler locomotives are recorded as having had their boilers replaced in the period 1911-13, and the raised fireboxes appear to be of Fowler design.

Brian Bouchardt 2/01

BUNDABERG SUGAR LTD, Bingera & Fairymead Mills

(see LR 155 p.17 & 18)

610mm gauge

By mid-January Bingera Mill's 0-6-0DM *INVICTA* (A1513 of 1956) had been fitted with a new cab at the Bundaberg Foundry but still required air piping and electrical work to be done before its return to Bingera. This is the locomotive that was hit by a long-distance bus during the last crushing season. The discarded old cab had been placed in a scrap area at Fairymead Mill.

The Com-Eng locomotive sent down from north Queensland to replace *INVICTA* following the accident was not Mourilyan Mill's 0-6-0DH 10 (AJ2359 of 1962) as previously reported but Babinda Mill's 0-6-0DM 19 (B1111 of 1956)

In mid-January, Bingera Mill's 0-6-0DH *ST.KILDA* (Ruston & Hornsby rebuilt E M Baldwin 6-2179-1-6-67 of 1967) was noted hauling a mower around the Fairymead Mill system on three consecutive days, followed by a day on poisoning duties.

Fairymead Mill's B-B DH locomotives 82 (E M Baldwin 10048-1-6-82 of 1982) and 91 (Bundaberg Foundry Engineers 001 of 1991) were undergoing overhaul at Bingera Mill, where a travelling overhead gantry crane allows them to be easily lifted from their bogies.

Lincoln Driver 1/01

ISIS CENTRAL SUGAR MILL CO LTD

(see LR 155 p.19)

610mm gauge

On 30 November 2000, Walkers B-B DH ISIS No.5 (617 of 1969) was noted at Horton hauling the mill's Plasser Model KMX-12T tamping machine (414 of 1995) towards the mill. The tamper had suffered a drive train failure. Also in the

Top: *The collection of locomotive relics on display at the Childers Mill site. Photo: Brian Bouchardt*
Centre: *Mourilyan Mill's Clyde 0-6-0DH 13 (59-203 of 1959) approaches the QR crossing at Goondi as it hauls a loaded rake off the Sundown line in July 2000. Following South Johnstone Mill's acquisition by Bundaberg Sugar, Mourilyan Mill may have seen its last crushing season. Photo: Rod Milne*
Above: *Following the takeover by Australian Southern Railroad, the DE class is being progressively repainted in ASR livery. Here DE1 (56-109 of 1956) and DE4 (56-122 of 1956) haul their empty train towards Iron Baron at the 17 kilometre mark from Whyalla on 29 December 2000. Photo: Daven Walters*

vicinity was Clyde 0-6-0DH 9 (75-812 of 1975) which was hauling a pair of ballast wagons. The work was in association with the laying of concrete sleepers in Horton yard and on Mammino's line which was relaid in 60lb rail following the end of the crushing season a month before.
Brian Bouchardt 12/00

SOUTH JOHNSTONE MILL LTD
(see LR 156 p.21)
610mm gauge
Around mid-January, Bundaberg Sugar made an offer of $14.2m for South Johnstone Mill, $36m less than its unsuccessful 1994 offer and well below the mill's $25m debts. The response of the grower owners of the mill was to reject the offer, and claims were made that the farmers would be financially advantaged by the mill going into receivership because of their liability in relation to the rescue loan made to keep the mill afloat last year. On 18 January the mill was in receivership and all mill workers were laid off. Bundaberg Sugar persisted with its bid but the Johnstone and Cardwell Shire Councils attempted to secure the support of Tully Sugar Ltd to stave off the bid with a better offer. This proved fruitless as on 22 February, a conditional agreement was signed by the receivers to sell the mill to Bundaberg Sugar for $15m.
It is expected that Bundaberg Sugar will close one of its Innisfail district mills for the 2001 season, with Mourilyan predicted to be the casualty and its cane split between South Johnstone and Babinda.
Financial Review 15/1/01 via Chris Hart; *Courier-Mail* 17/1/01, 19/1/01 & 23/2/01; ABC Cairns Local Radio News 19/1/01 & 22/1/01; *The Australian* 19/1/01; *North Queensland Register* 25/1/01 via Chris Hart.

SOUTH AUSTRALIA

AUSTRALIAN SOUTHERN RAILROAD, Whyalla
(see LR 157 p.21)
1067mm & 1435mm gauge
An additional CK class Clyde Bo-Bo DE, CK3 (67-500 of 1967) was sent to Whyalla around the start of February for narrow gauge traffic on the iron ore line. This allowed for three CK - DE pairings, necessary for one man operation as only the DE class are fitted for use with a hand-held radio control device which is required at the Whyalla unloading station.
On 22 January, a small fire in the exhaust system of standard gauge Clyde Bo-Bo DE DE9 (65-430 of 1965) caused some damage and took the loco out of service. It seems it was replaced on steelworks duties by ASR's Co-Co DE 852 (A E Goodwin 84716 of 1963)
The three ex-Newcastle Steelworks hot metal ladles have been numbered 13, 14 & 15. Two coke oven locomotives were noted on a visit on 7 February.
Wes Sutton 1/01 (Ausloco internet discussion group); Daven Walters 1/01; Brad Peadon 2/01 (both LocoShed internet discussion group)

EDI RAIL, Port Augusta
1435mm gauge
A modified Windhoff Model RW200DH "Teletrak" 4wDH locomotive is in use as workshops shunter at the Port Augusta workshops. It was originally built in 1982 as a remote control unit for use at the Dry Creek bogie exchange centre, where it operated as number 2. Taken over by Clyde Engineering at the end of 1997, it was moved to Port Augusta and modified for conventional operation. This was presumably the inspiration for the modification carried out on a similar unit for Loongana Lime (see LR 155 p.21).
Daven Walters 1/01

VICTORIA

ENERGY BRIX AUSTRALIA CORPORATION PTY LTD
(see LR 157 p.21)
900mm gauge
The two ex-Queensland Railways Walkers B-B DH locomotives were purchased from Cooks Construction in August 1999 and were made available for sale by Energy Brix in late January, 2001. All brown coal transport to the briquetting plant was by road truck.
Elva Anderson (EBA Materials & Contracts Manager)

Windhoff 4wDH of 1982, the workshops shunter at Clyde Engineering, Port Augusta, on 8 February 2001. This standard gauge unit was originally used under remote control at ANR's Dry Creek bogie exchange facility. *Photo: Brad Peadon*

WESTERN AUSTRALIA

HAMERSLEY IRON PTY LTD
(see LR 157 p.21)
1435mm gauge
A further three General Electric Co-Co DE Model 44CW locomotives have been delivered to Hamersley Iron from the USA recently. Their numbers are 7094 to 7096, builder's numbers 52841 to 52843 of October 2000.
Richard Montgomery 1/01 & 2/01 (LocoShed internet discussion group)

LRRSA NEWS

MEETINGS

ADELAIDE: "Light Railway Videos"
Several videos of light railway interest will be shown.
Location: 150 First Avenue, Royston Park.
Date: Thursday 5 April at 8.00 pm.
Contact Arnold Lockyer (08) 8296 9488.

BRISBANE: "Field Excursion Number 3"
Entertainment will be a report on Field Excursion Number 3, to Clive Plater's Residence and the Buderim Tramway, together with some video of railway operations. Members who went on the tour are invited to bring slides and photos.
Location: BCC Library, Garden City Shopping Centre, Mount Gravatt.
After hours entrance opposite Mega Theatre complex, next to Post Office.
Date: Friday 6 April at 7.30 pm. Entry from 7 pm. Contact Bob Dow (07) 3375 1475

MELBOURNE: "Logging Railways"
Frank Stamford will be giving a presentation comparing logging railway practices in Australia, New Zealand and North America.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday, 12 April at 8.00 pm.

SYDNEY: "Uintah Railway"
We will be showing a video, on a wide screen, of the Uintah Railway in Colorado, featuring 85ft radius curves and a 1 in 13 grade at Moro Castle, plus slides of the railway's remains from Ross Mainwaring.
Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).
Date: Wednesday **18 April** at 7.30 pm.
Contact Jeff Moonie (02) 4753 6302.

CANE RAILWAY DOUBLE HEADERS

Brian Webber and John Browning

One of the attractions for the rail enthusiast of Queensland's sugar cane railway systems is the lack of uniformity. Although there are some standard types of locomotives which are seen at most mills, these have often been customized to suit local conditions, or variations introduced at times of repair.

Some years ago, a number of mills realised that they should move from small rigid-frame locomotives to larger bogie units. Many bogie units are now in use but mills have always been frugal with their locomotive fleets so some came to the decision to also utilise multiple unit operation of the smaller units. Although these units can generally be used singly when required, they are fitted up to work in multiple with just one set partner, unlike the "main-line" railways which vary their multi-unit consists regularly.

Most mill locos are seldom turned. They usually run engine leading towards the mill, it is said to provide greater protection to the crew in the event of a collision when hauling the heavier load. It should be remembered that cane bins have no brakes. Most mills have chosen to couple their pairs of locomotives with cabs together though Tully Mill has coupled their two pairs facing the same way. Up to 1993, Isis Mill operated two pairs of Clyde 0-6-0DH locos "cow and calf" with the cab removed from one unit, but these units have long since been sold for use in Fiji.

The accompanying photographs show some variations on the theme as noted during the 2000 season.

Clockwise from left: *Moreton Mill's 8-tonne EM Baldwin 0-4-0DH locomotives* MAROOCHY *(6-1064-1-11-64 of 1964) and* VALDORA *(6-1258-1-6-65 of 1965) were built to work on light lines around the Maroochy River. They were fitted up to operate in multiple in 1980 and are here seen heading towards the mill.* VALDORA*, with an enclosed cab, is the preferred unit to drive from. Photo : Brian Webber* ❑ *Mossman Mill's Com-Eng 0-6-0DH locomotives* FAUGH-A-BALAUGH *(AL4190 of 1965) and* DOUGLAS *(AL3372 of 1964) were fitted up for multiple-unit running in 1981. The box shaped object on the roof of* DOUGLAS *is a mirror unit that extends in front of the cab and allows the following rake to be observed by the driver while facing forward in the normal driving position. Photo : Brian Webber* ❑ *In 1988, Babinda Mill fitted up for multiple unit running the two Clyde 0-6-0DH locomotives it had acquired from Goondi Mill when it closed the previous year. 2* GOONDI *(55-56 of 1955) and 3* DARADGEE *(56-90 of 1956) await to leave the north end of the mill yard with a rake of empties bound for the old Goondi Mill area. Photo: John Browning* ❑ *Tully Mill has chosen to operate its multiple-unit fitted Com-Eng 0-6-0DH locomotives "elephant style". One advantage of this is that it enhances the cooling airflow to the radiator when hauling a load of full bins. Here* TULLY No.12 *(AD1351 of 1961) and* TULLY No.15 *(AK3574 of 1964) head towards the mill. The air conditioner fitted to No.12 makes this the preferred unit to drive from. Photo : Brian Webber*

Book Reviews

The Shale Railways of NSW

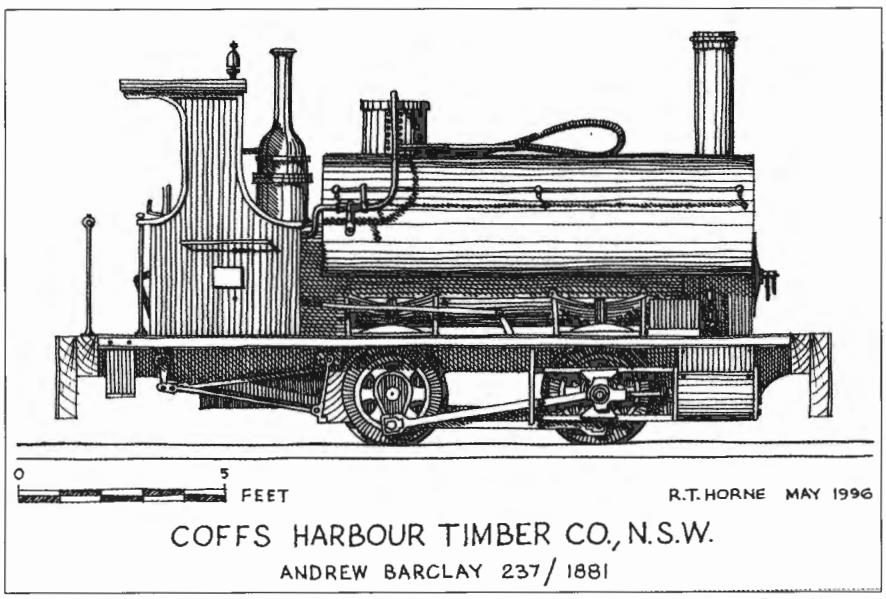
by GH Eardley and EM Stephens

20cm x 28cm. 224 pages, hard cover, 226 black & white photographs, 24 maps, 6 rolling stock diagrams, addendum and index.
Published by Australian Railway Historical Society, New South Wales Division, 67 Renwick Street, Redfern, NSW 2016. Price $55.00.

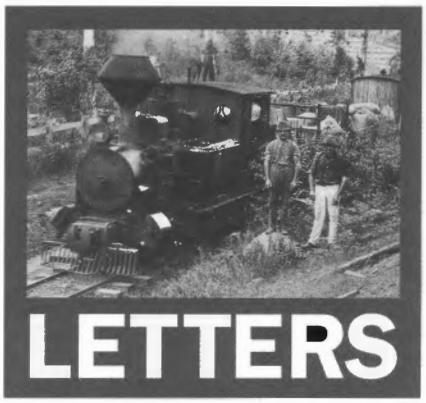
The ARHS NSW Division is to be congratulated for the re-issue of this classic work, first published in 1974. The entire book has not only been completely re-type set by computer, with maps similarly redrawn, but is now printed on gloss art paper.
The quality of reproduction of the photographs is greatly improved and their number has been considerably increased, several showing rare historic views of locomotives that were not available in 1974.
Quite rightly, the publisher has decided not to up-date the text as it "was largely written by Giffard Eardley in his own unique style." Those of us old and lucky enough to have known Giff will certainly approve. True, his inimitable style tended to more words as hard facts became fewer, but we all owe him an enormous debt of gratitude for his life-long researches, generosity and encouragement to others and for committing so much to the printed page. The amount of detail in the information and maps is formidable, with the added interest of descriptions of the sites as visited by enthusiasts from the 1930s to the 1950s.
Where up-dating of the text is required, the addendum provides new information on each location as is necessary and a " photo gallery" has been introduced showing yet more new views. So this book is still good value for those who have the original and a must for those that do not.
Most of the shale railways and their attendant mining and processing works occured in truly spectacular mountainous scenery, which added to the interest and difficulty of their operations. All suffered various changes of ownership, far too numerous to list here. However, the main players were the Australian Kerosene & Mineral Co., NSW Shale & Oil Co. Ltd., Commonwealth Oil Corporation Ltd., NSW Shale Oil Co., John Fell & Co. Ltd. and the British-Australian Oil Co. Ltd. The railway systems (all of which had attendant narrow gauge skipways, cable or horse worked) were as follows:

Mount Kembla
1865-1878 Non-locomotive lines only.
Hartley Vale
1878-c1930 Dübs and Morts Dock locomotives, on the unusual 1m gauge.
Joadja
1878-1908 Four Andrew Barclay 3'6" gauge locomotives.
Katoomba
1879-1933 Non locomotive lines only. Part of the haulage line still operates as the "Scenic Railway".
Airly
c1883-1897 Non-locomotive lines only.
Torbane
1883-1918 Two locomotives, originally NSWGR 69x and 360x.
Newnes (Wolgan Valley Rly.)
1907-1932 Four standard gauge 'class C' 3-truck Shay locomotives plus a Kerr Stuart tank engine.
Murrurundi
1885-c1914 One locomotive, originally NSWGR 353x.

The two major lines were those owned (initially) by the AKOM Co. at Joadja and the COC Ltd at Newnes. The former was operated in two sections: the lines serving the mines and retorts deep in the Joadja Valley and that from the top of the 1 in 2 incline out of the valley, a gently undulating line of some 9 miles (based on the map; a contemporary account quotes 16 miles) to the Mittagong interchange with the NSWGR. En route it met and crossed the private standard gauge line to the Box Vale Colliery. The latter operation, at Newnes, (the subject of at least two other substantial books) was perhaps the most spectacular of all the railway lines in Australia, including the NSWGR's Lithgow Zig Zag. Its winding course of 32 miles, with a maximum gradient of 1 in 22.5, included two tunnels and sections that were literally a ledge carved in the mountainside, overhung by vertical cliffs. A passenger service with two imported carriages was operated from a 'proper' station provided at Newnes to Newnes Junction on the NSWGR's Great Western Railway.
The rolling stock details for the Wolgan Valley Rly, in the addendum, should also show that the two carriages were built at the Metropolitan Amalgamated Railway Carriage & Wagon Co's Lancaster Works in 1908, order nos. 8400 (the composite 1st/2nd car) and 8401 (the 2nd class car). The reference to the English 4 wheel petrol railcar of 1911 carrying, at least latterly, an Allday & Onions plate, but querying if this came from some machinery within the Newnes Works, surely indicates that the railcar was built by this Birmingham firm. At this period they were the builders of such railcars, including that built in 1908 for the 2ft gauge Goondah - Burrinjuck Light Railway.
The transference of the book to computer production has had a down-side in that a number of typographical errors have been introduced and the photograph on page 59 of the entrance to the old coal mine at Katoomba is now upside down.
The drawings in the addendum, on page 191, of the Andrew Barclay locomotives at Joadja, attributed to this reviewer, are a travesty. The computer 're-drawing' has rendered them crude of detail and inaccurate in terms of proportions and scaled dimensions. The correction in 'Light Railways' that the driving wheels of Andrew Barclay 237 were only 2'6" diameter, not 3'0½" as shown (and very apparent in the photograph of the locomotive on page 49, not included in the original book) has been overlooked. The drawing below shows better the correct appearance of this locomotive.
These are but minor points and the book is highly recommended.
Richard Horne



Andrew Barclay 0-4-0ST B/N 237 of 1881 shown as working for its second owner, Coffs Harbour Timber Co., on the north coast of NSW. *Drawing: Richard Horne*



LETTERS

Dear Sir,

Light Railways in World War One (LR 152)

I read with some interest the account of light railways behind the Allied and German fronts in World War One. Recently, rifling through the wreckage after our house was burnt down, I came across the diary of my 23 year old uncle, Private JD McRae, who went to the front in 1917. The following quotations from this diary are, I think, both enlightening and interesting:

June 20th 1917

In the afternoon, Alan and I walked about 2 kilos to the Railway town of Achiet-le-grant....

We visited the motor transport repair depot and also had a look round the station at the various locos there. The most interesting was a petrol loco on the small gauge line. This light line can be laid at the rate of 2 miles per diem. and is used wherever the front line is pushed forward a bit. Tea was procured at the YMCA Tent. Finding the picture show overcrowded, we returned to Camp early in the evening.

July 6th 1917

We all slept till "Cookhouse" went at 8am. At 9 we were divided into two parties, to work shifts from 9-3 and 3-7. We were detailed to salvage certain items from the ruins for use at the front. These things we pulled out, loaded onto motor lorries and from these transferred them to railway trucks about 1/2 a mile away. This railway is on a miniature scale, with a very small gauge and tiny locos and it runs right through the village at which we are camped and makes the place look a little bit civilized.

Today...our job was to salvage angle iron and "corkscrews".

After work, Allan and I "found" a small truck and put it on the rails and five of us set out for the Poziers canteen, about 3 miles away, pushing our truck uphill and riding it down. We enjoyed the latter more than the former.

Coming home, we were flying down a steep hill at a terrific "bat" when we caught sight of a petrol loco coming in the opposite direction on our line. In a second we capsized our carriage, groceries and all, and waited till our opponent had passed; after that reinstated ourselves and sailed home triumphant.

A quiet smoke in bed ended the day and our consciousness floated away amid the languid wreaths of smoke and left us as helpless as the sons of Clovis in the arms of the Infinite.

July 7th

We loaded timber for sleepers, angle iron and wire today. We also visited a tank which had been put out of action and a Fritz 6" howitzer that had suffered the same fate.

July 13th

Shortly after dinner, while I was scrubbing the dixie at the water-point, King George passed through on the miniature train, about 6 feet from where I stood. Being in shirt and trousers only, I don't suppose he thought me a very respectable sort of soldier.

September 18th

Artillery duel - dirt and water flying - three of our boys buried in dirt.

Then, sadly, from the Battalion Chaplain:

27/9/17

Dear Mr. McRae,

Just a line to tell you...I attended and was with your boy...when he died.

His wounds were severe, though he was in little pain...he...passed peacefully away during the night of the 19th.

With all sympathy in your sorrow.

WK Douglas
Chaplain 12th Btn AIF

John Dunlop
Bermagui, NSW

Dear Sir,

"Foden" locomotives (LR 149 & 150)

Bill Henderson examined the "Foden" locomotive from the Beaudesert Tramway at the yard of machinery merchant Bloomer in Brisbane in 1945. It was on this occasion, that he observed the locomotive carried an "Alchin" plate rather than "Foden".

Another, similar "Alchin" locomotive, was traced by Bill and the late Ken Rogers in 1947 to a machinery merchant's yard at Woolloongabba in Brisbane. Like the Beaudesert Shire locomotive, it had operated in the Yarraman district, presumably also for Pines & Hardwoods Ltd. When contacted, the dealer seemed reticent to say much about the locomotive but he did indicate that it had gone to a sawmill at Mullumbimby, NSW. Bill managed to visit the sawmill in the Christmas holidays of 1955 and found the locomotive there. He was told that it did not belong to the sawmill proprietor but was being kept there until a financial claim on it was discharged. The loco was noted to have a circular "Banks Ltd" plate on the smokebox door.

Both locomotives had originated as steam road lorries owned by Brisbane carriers Banks Ltd before their conversion to railway use. The conversion work was carried out at Banks' premises in South Brisbane in 1917-9, according to Keith McDonald. As locomotives, they had a drive shaft above the firebox, then a chain drive to a rear axle, on the right hand side only. This meant that the front of the locomotive would always be tending to try to turn to the right when moving forwards, with the result that the right hand wheel of the leading axle of the four wheeled bogie would always be pressing against the right hand rail, with subsequent wearing of the flange of that wheel and of the rail.

There was a third 3ft 6in gauge converted steam lorry locomotive used in the Brisbane Valley. This time it really was a converted Foden and it worked at Moore, apparently for sawmillers Brown & Broad. It had been converted for rail use by the engineering firm FE Barbat & Sons at North Ipswich. It seems it was abandoned there as mentioned in LR 150, and its frame lay by the side of the Brisbane Valley Highway for some time.

Thanks to Bill Henderson and Keith McDonald for making this information available.

John Browning
Rockhampton, Qld

Dear Sir,

Fowler vs Bullock (LR 150, 51, 52, 53)

Four letters have appeared recently in *Light Railways* (LR 150-2) pondering the location and identification of a locomotive involved in a rather unusual accident with a beast in 1925-26. As this accident happened "almost in my own back yard" so to speak but many years ago, I have made some local enquiries with the following results.

Interview with Bill Hohnke

I met Bill Hohnke when I started at Babinda Mill half way through the 1987 crushing season. At the time, Bill was employed as a boilermaker's assistant until his retirement in 1993.

Bill's father, also Bill, assisted in recovering the locomotive on the morning after the accident depicted in the photograph in LR 150. Bill's father was an evaporator stage operator at Babinda Mill at the time.

Bill has a picture postcard of the accident (the same view as in LR 151) with the following description on the back written by his father:

This is a full grown bullock under the loco & was carried 120 feet across a bridge in front of a 15 ton Fowler engine. but how no one knows.

This accident happened at 3.10 am on the midnight shift, the bridge is over deep creek (it is 50 feet where the engine is) on another branch line from the main line that crosses Babinda Crk. Well I was called out at 5.10 am and the engine was in the mill at 9.25 am, this was my first engine to put on line when off, but now no one else is ever sent out, let J.A. see this Photo I bet he will think loco driving here is a bit of a rough job.

Unfortunately the postcard is not dated.

Bill believes that the firewood was being brought in from Johnstone's property at the foot of Mt Bellenden Ker. This property, like many others in the area, was heavily wooded at the time. Bill's father told him that he and others pulled back the firewood trucks by hand and with some difficulty as the line was downgrade to the bridge in the direction that the train was travelling and therefore they had to drag the loaded trucks uphill.

Interview with Mick Briske.

Mick has been retired for several years, but has been a Babinda resident all his life.

He confirmed that the fireman on the loco at the time of the accident was in fact his older brother, Ted (Briske). The driver was Bill Conkey and according to Mick it was Ted who had stopped Bill from jumping.

Mick accompanied me out to the accident site just to make sure that I had identified

the right bridge! He stated that his brother Ted had left Babinda Mill to work on locos at Tully Mill for that mill's first crushing season. *It* [Tully Mill] *made a trial crushing in 1925, and since that time has been supplied with a heavy annual quota of cane produced on the lands in the district.* [1]

The Photograph

The original(?) photograph was hanging in the old cane inspector's office at Babinda Mill until this was demolished in 1991. It then resided in my office at the mill until finally being hung in the new office reception foyer where it is displayed today along with other mill memorabilia.

The Bridge

The bridge is located on the branch line to the west of Babinda Mill's main tramline running south. This branch line accesses the cane fields in the Boulders area west of the mill up to the foot of Mt Bartle Frere. The Boulders road runs parallel to the tramline at the bridge which is 3.9km from the mill office by road.

The original timber trestle bridge has been replaced with a steel girder type supported by concrete abutments and piers. It spans what is now known as Knowles Creek and the present rails are 6 metres (20ft) above the creek bed. The now sealed road appears to have been built up and moved closer to the bridge, apparent when comparing the site with photographs from the time of the accident.

The remaining stumps of one of the trestles are still visible in the creek bed.

Date

Discussions with other elderly Babinda residents did not result in a date of the accident being confirmed. As Ted Briske started work at Tully mill on their first full season, he would have left Babinda Mill at the end of the 1925 season, which indicates the accident happened in that year.

The Locomotive

The locomotive involved in the accident was built by John Fowler & Co. Which one of the first three Babinda Mill locomotives is not yet clear, however the damage to the cladding on the right hand cylinder appears similar to the damage shown in later photos of No. 2 (B/N 14173). The locomotive in the photograph has its original boiler and smokebox, whereas all other photographs I have seen of No's 1, 2 and (rarely) 3 show the larger replacement boilers and smokeboxes fitted.

Unfortunately, not even the 12in x 14in photograph of the accident in the Mill foyer is clear enough to show the text on the maker's plate, but what is obvious is the lack of a mill number. Babinda Mill locomotive numbers were fitted above the maker's plate as later photographs show. Although locomotive B/N 14173 was numbered 2, it was actually the first locomotive delivered to the mill and the last steam loco in service at Babinda, other than No.7, a Perry 0-6-2T (B/N 7967.50.3).

I suggest that the locomotive involved in the accident was No.2, based on the cladding damage.

Curiously the John Fowler works General Arrangement drawing [3] has "June 1st 1916" next to the name *BABINDA* and B/N 14173, however I suspect that the design was referred to as the *BABINDA* class; the other four locomotives delivered in North Queensland to the same design are listed on the drawing. The last, B/N 14667, went to South Johnstone mill in 1916. Babinda Mill made its first crushing in 1915.[1]

Locomotive coupling

All photographs that I have seen of the three original Babinda Fowler locomotives show that they maintained their centre buffing coupler to the design shown on the original John Fowler works drawing.[3]

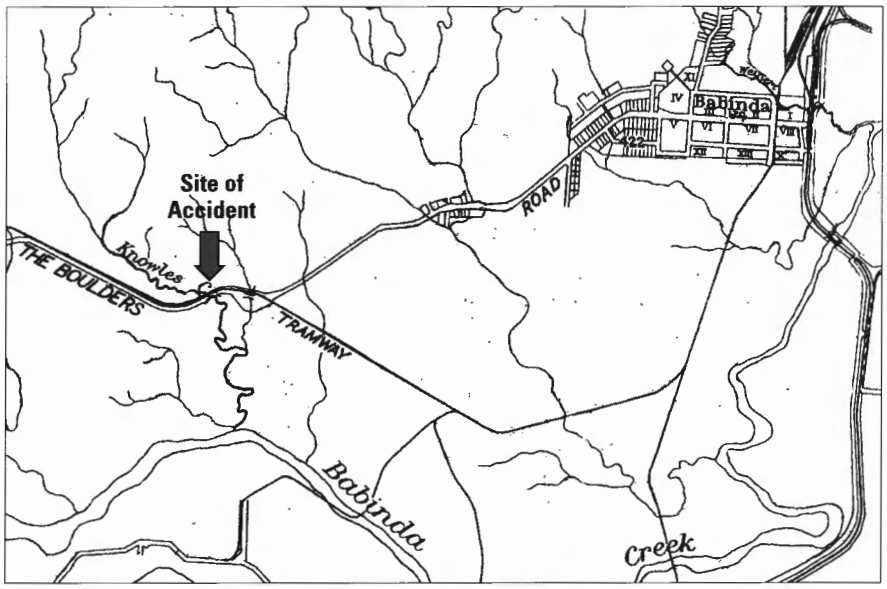
Postscript

The small circular "swing-out seat" visible in the rear view photographs perhaps needs some explanation. The official use was so the seat could be "swung-out" of the way whilst the fireman tended the boiler in the cramped space on the footplate, NOT used as a pleasant position to sit on hot days! Retired drivers strongly deny such activities.

Peter Lukey
Babinda, Qld

References

1. *Australian Sugar Year Book.*
2. Chris Malone, extract from *Tramway Locomotive Rosters* (Steamworks).
3. John Fowler & Co, drawing No 61131, Institute of Agricultural History and Museum of English Rural Life, University of Reading, UK.



BABINDA MILL, BABINDA - LOCOMOTIVES 1, 2 & 3

Identification	Builder	Builder's No.	Year	Wheel Argmnt	In Service	Note
BABINDA /2	John Fowler	14173	1914	0-4-2T	1914	1
1	John Fowler	14418	1915	0-4-2T	1915	2
ANZAC /3	John Fowler	14666	1915	0-4-2T	1915	3

1. Scrapped 1970. 2. To Moreton Mill, Nambour *BLI BLI* 1960. 3. Disposed for preservation to park 1961-1971, scrapped 1971 [2]

Builder's photo of BABINDA. *Photo: Rural History Centre, University of Reading.*

Dear Sir,

Two Krausses and a 'Koppel (LR 156)

I was interested to read this article because it mentioned the delivery of one of the locos to North West Australia in 1910 and therefore I am sending you this information which may be of interest to some of your readers. There was one error that caught my eye, though, and that is: the port was named POINT Samson, not PORT Samson, both it and Cossack being on the eastern side of Cape Lambert.

However the original port for the Roebourne district was at Cossack, which itself was named Tien-Tsin at its beginnings in about 1863, after the first ship to bring early settlers. This was later changed to Cossack in commemoration of the visit of HMS *Cossack* in 1871 with Governor Weld on board. Roebourne was styled in those days as "the capitol of the North West" but it was never a very big place as the accompanying photo dated 1907 shows - Cossack being even smaller in spite of the pearling that went on round about.

The two towns were connected by a tramway that was commenced in 1887 by Captain Morris who died before its completion. W. Lambden Owen was appointed to succeed him and he wrote of his escapades in a book titled: "Cossack Gold" published in 1933 by Angus & Robertson. I quote the following from pages 32 and 33 as being apposite:

When I first knew Cossack and Roebourne, transport between them was by horse-team and buggy. Cartage over the nine miles was at 25 shillings a ton. My immediate job was the connection of the towns by tramway and the reduction of freights.

I was at work in the tramway, begun under my predecessor Capt, Morris, and which it was my business to complete and manage. It was a two-foot gauge horse-drawn affair. The rolling stock was brought from England. It consisted of six passenger coaches, each drawn by one horse, and a dozen goods trucks drawn in rakes by two.

I halved freights bringing them from 25 shillings a ton to 12 shillings and 6 pence; but still the users complained. I told them that if they would give me back-loading I would cut rates by another half. One-way traffic was my trouble. I was getting plenty from the Port to Roebourne, but with the exception of wool during the shearing-season (in the winter) I was carrying little or nothing back. So the rates had to remain.

My Chief, Mr Wright, never tired of boasting that "this was the first paying railway in the colony. We made £500 to £600 a year profit, whereas the railways based on Perth were running at a loss.

When a new jetty was built at Point Samson in 1903/4 the tramway was extended to the new port and Cossack declined in importance. I have not yet been able to ascertain when the tramway was closed but that it played an important role in the development of the district cannot be gainsayed.

On a personal note let me say how much I enjoy reading your excellent magazine.

Ted Doncaster
Dianella, WA.

Dear Sir,

Mourilyan Harbour loco (LR 156)

I was interested to read some of John Browning's comments on the ownership of the Walkers loco at Mourilyan Harbour in his review of the book on the Innisfail Tramway in LR 156.

One of the problems of researching history is that records can be misleading. This is illustrated by the confusion over the ownership of this loco and others used at bulk sugar terminals in Queensland.

When bulk sugar handling commenced at Mackay in the 1950s, there was no organisation available to buy the equipment and facilities to handle the bulk sugar, so it fell to the harbour boards to fill the gap. This was facilitated by an appropriate provision in the *Harbours Act*. The harbour boards recouped their expenditure by a levy on each ton of sugar shipped. As the industry was expanding rapidly at the time, the money was repaid quickly.

For example, the Mackay bulk terminal locomotive *Alex S Hamilton* was bought by the Mackay Harbour Board. Contemporary newspaper reports proudly proclaimed the harbour board's initiative in purchasing this locomotive, which was named after the then chairman of the board.

Gradually, the sugar terminal organisation evolved to the extent that, last year, it became a grower owned company. The port authorities, as the harbour boards had become, had varying views as to the ownership of the sugar terminal assets, some of them showing them on their books until the late 1990s, so it is hardly surprising that historians can be confused.

So, the Mourilyan loco would have been bought by the relevant port operator and ultimately transferred to the sugar terminal.

But, as they say, there's more. Harbour boards were set up in the 1890s at Bundaberg, Gladstone, Rockhampton, Mackay, Bowen, Townsville and Cairns. The remainder of the ports of Queensland were operated by the Queensland Government, directly by the Department of Harbours and Marine. These days, the Ports Corporation of Queensland, which is a government owned corporation, operates Mourilyan Harbour as one of a number of ports for which it has responsibility. So although there was a harbour operator that owned the assets, there was never an actual Mourilyan Harbour Board.

Barry Campbell
Cedar Creek, Qld

Dear Sir,

Heritage Editorial (LR 155)

I obtained a copy of the October 2000 issue of *Light Railways* during a recent visit to Australia and have the following comments in response to the Heritage & Tourist editorial.

In the United Kingdom many preserved railways are struggling to survive. They often have too many individual projects ongoing, and are not focused on the fact that the customer through the gate is what pays for the running of the railway.

We have about 58 million people in the United Kingdom, so if some railways struggle here, it is hardly surprising that you have the same problems. Those that survive will be the ones that had proper initial funding and a focused business plan. Heritage or not, the business has to make a profit to survive.

A comment from one visitor to the Great Central Railway sums up the issue: "It's all very well having a Steam Day, but we see these over and over through the year." Different groups should, where possible, swap locomotives around and vary what the customer can see and ride behind.

Good luck to all your preservation projects, and please, take these comments in the spirit that they are intended, of encouragement.

Tony Le Grys
Nottingham, UK

A horse tram traverses the main street of Roebourne in 1907. *Photo:* Western Mail

Dear Sir,

The Ida Bay Railway (LR 157)

I am writing to add a few notes to the article on the Ida Bay Railway in LR 157. Firstly, the extension to Deep Hole was apparently constructed in 1950, not as was suggested on p.3, in the mid 1930s. The Hobart Mercury of 27 September 1950 (p.6) included a photo of an Ida Bay train and noted that the line would soon be extended for 3.5 miles to a newly constructed jetty. On my first visit to the line on 23 January 1957 I walked down to the junction of the old and new jetty lines. The track on the old line had been disconnected and slewed away from the new line at the point of divergence, but it was in place and not very overgrown towards the old jetty. I had no idea how far it was to Deep Hole and continued walking in the rain, but fortunately a train appeared and the driver explained the distance involved and gave me a ride back to Ida Bay. The family were sufficiently surprised by my reappearance in an empty limestone bin to be deflected from their wrath over their long wait.

In 1964 I made notes of an Ida Bay staff member's recollections of the Krauss locomotives and other aspects of the railway's operation. He said that the 2-4-0T (5682) was a very good engine and recalled that it had been fitted with a new boiler. Because of the Forestry Commission's concern about fires it was dismantled with the intention of mounting a diesel engine on the frame. However, the Malcolm Moore units were purchased instead. The 'small Krauss' (2640) was purchased from the machinery dealers AG Webster and Son. It was not in good condition and was not used much. It was sent to the carbide works at Electrona in about 1940 for repairs, but did not return, Mt Lyell No 9 (5988) was a good engine, but it did not ride as well as the 2-4-0T. The Chevrolet railcar was purchased new in about 1942, replacing an old petrol railcar that had given much trouble. The top section of the line from the Marble Hill quarry to the Mystery Creek quarry was abandoned in the early 1950s when the quality of limestone at Mystery Creek declined.

The Public Works Department files on the disposal of the Sandfly Tramway give details of the sale of equipment to Ida Bay. In December 1921 the Hydro-Electric Power and Metallurgical Coy advised that they proposed to build a tram from Ida Bay quarry to the water and asked that Sandfly equipment be reserved for them. They asked specifically for the '10 ton locomotive' (5682) and at least 4 miles of rail. By 5 April 1922 they had settled on the locomotive, 5 large trucks, 3 miles 50 chains of 20 pound rail and 40 chains of 43 pound rail. On 23 August 1922 the were noted as having purchased the 10 ton locomotive, 3 seven ton trucks, 2 miles 66 chains of 19.5 pound rail and 1 mile 23.5 chains of 43 pound rail. They were also accused of having dismantled two other trucks left at Margate and removing some of the axle boxes and covers and brake gear.

I have a copy of a list of Tasmanian narrow gauge railways prepared (I think) by the Forestry Commission in the early 1950s. It gives 1923 as the opening year of the Ida Bay Railway.

Finally I think 'Nagabeena' on p.6 should read Nabageena.

Jim Stokes
Curtin, ACT

Dear Sir

In this fascinating article by John Peterson et al, the driving styles used by the limestone train drivers were discussed: One method involved driving the locomotive flat out with the wagon brakes on. The other method involved driving quickly to maintain stretch in the couplings.

Back in 1980, when I drove the tourist train with the safety and convenience of Westinghouse air brakes on all passenger carriages, a worker at the Lune River quarry described to me how he had handled the loaded limestone trains, with their simple, but reasonably effective, mechanical braking system. To activate the wagon brakes, the driver had to haul hard on the loco handbrake, and/or change down a gear and rely on engine braking to slow the loco. This would cause the couplers to bunch up and a kind of spring loaded mechanism would push the wooden chocks onto the wagon wheels. In the downhill section of line from the quarry to Ida Bay, he would drive mainly in second or third gear, revving hard where necessary, then backing off on corners and the steeper bits where the engine compression would slow the loco, thus activating the wagon brakes. Apparently, when the driver took his foot off the throttle, he'd feel the wagons pushing from behind momentarily, then their brakes would come on and he'd feel the wagons pulling back. Applying the power again would stretch the couplers and release the brakes.

Although the line reached sea level shortly after the Lune River depot, there was one significant uphill section along the remaining few km to the Deep Hole jetty. Driving uphill with a loaded train certainly required the driver to go flat out, making the most of the Malcolm Moore's 32 horses. The worst thing he could do would be to stall a loaded train on this uphill section in wet weather, as the loco hand brake would not always hold the train. It was safer to find first gear and cut the engine to lock the loco wheels, then to chock the rear wagon wheels to prevent the train from rolling backwards, before starting up and attempting to get moving again.

The comment in the article about the difficulty of reversing the empties into the depot siding when the rails were greasy was spot on, as (to the best of my recollection) there was no way to activate the wagon brakes when reversing downhill.

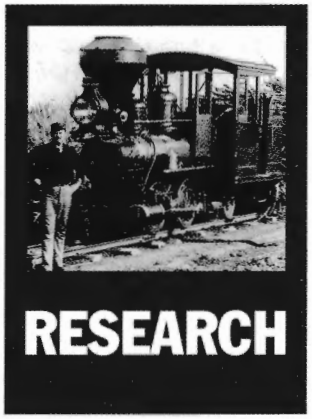
James Shugg
London, UK.

Dear Sir,

Nasmyth Slag Ladle (LR 156)

W Sandford Ltd of Lithgow designed a "Slag Truck" for the Lloyd Copper Co. Ltd in 1900, based on the same two pot design as those in use at Cobar. The pots were designed to travel with their axis parallel to the rails, ie, one before and one after the four wheeled truck (Drawing #1240, 17 June 1900. Lithgow Council Library, Local History Collection).

Jim Longworth,
Cheltenham, NSW



Request for Information/Photos

The editors have on hand archival material for three brief articles but need photographs and possibly additional information to finish off them off. If you can help by providing any notes, references or photographs, please contact the editors. Topics are as follows:

- Clarence River harbour works at Yamba and Iluka, northern NSW, commenced by the NSW Public Works Department in 1951 and which had two standard gauge Ruston & Hornsby diesels delivered in 1952.
- Oberon Dam on the Fish River in NSW, built from 1951 by the NSW Public Works Department, utilising a 2ft gauge railway for concrete placement.
- Upper Yarra works in Victoria, undertaken by the Melbourne & Metropolitan Board of Works from 1947 to 1957. Major works involving rail transport included the Mt Little Joe tunnel, the Upper Yarra Dam diversion tunnel and the Upper Yarra Dam outlet tunnel.

Anderson's Tramway, Barkstead, VIC

The Great Dividing Trail Association Inc. is developing a network of public walking tracks through Central Victoria. So far, tracks have been completed linking Daylesford with Castlemaine, while the recently completed Federation Track links Ballarat with Daylesford via Creswick. This latter track includes the Anderson's Tramway Walk between Mollongghip and Barkstead, which follows the formation of the former timber tramway that operated between 1863 and c.1885. This track is not a railtrail, as the path is beside rather than on the former rail formation, thereby preserving the existing relics. Most of the information the group has about the timber tramway comes from Norm Houghton's 1980 LRRSA book *Timber and Gold.*

Although Parks Victoria has a picture of one of the bridges on the tramline, the Association has not so far been able to locate and images of the tramline in operation, nor of the operatives. If any readers have such material in their possession or know where such material may be located, Patrick Hope of the GDTA is keen to hear from you. Patrick is the Coordinator of the Centenary of Federation Walking Track, The Great Dividing Trail Association Inc., 603 Cathcart Street, Bunninyong VIC 3357. Phone/fax: (03) 5341 3711; Email: parthope@netconnect.com.au

Historical Movie Film

Peter Goed, proprietor of the Redcliffe Picture Palace Archive has come into procession of an early movie film that contains several scenes of railway operations in the South Pacific Islands c.1928. The film was made by a Sydney Dental Surgeon named Wilson, who travelled extensively throughout the Pacific, making trips to New Guinea several times to visit a good friend of his, Wal Stubbings. The film shows extensive railway tracks on an unidentified wharf, probably in New Guinea, and scenes around Apia in Samoa with the former German narrow gauge railway (LR 147, pp.24-25) still in evidence. There is a good sequence of the famous Free Passenger Train on the Lauthoka-Ba sugar tramways in Fiji. The loco is not all that clear below the footplate, but is almost certainly the Hudswell Clarke 4-4-0 (Lautoka Mill No.18) built specially for this train in 1915. The Queensland Division of LRRSA is currently negotiating with Peter for a special screening of this film and other early movies showing light railways in Queensland and elsewhere in Australia.

Lautoka No.18 (Hudswell Clarke 1118/1915) at the head of the Free Train, in 1958. Photo: Derek Cross

Noel Butlin Archives Centre (NBAC), Canberra

Further to LR 156 (p.27), this important archives has received a reprieve. The new Vice-Chancellor of the Australian National University, Professor Ian Chubb, has announced an increase in 2001 funding for the NBAC, with an additional $100,000 over the $150,000 already in the budget. Funding beyond 2001, however, will depend on the Archives meeting certain conditions. The Archives will have to position the ANU's custodianship of the NBAC as a business and labour archive in the national interest. The University will want to see evidence of national usage and plans for future viability, including fundraising.

The NBAC contains a lot of valuable materials for the industrial and light railway researcher. Readers are encouraged to make use of the Centre to enhance the prospects of its longer-term survival. *Editor*

Amusement Park Railways

Readers are referred to the web site 'parktrains' for an American listing of such lines. Is any reader willing to help Jim Longworth create a preliminary listing for New South Wales? Contact jimlongw@hotmail.com or via Editor

Leconfield Colliery

Further to the protracted discussion on a possible locomotive on this line, readers are referred to the Newcastle Regional Museum web site for a detailed history of the colliery. The history refers to a locomotive there but does not give any reference for the claim. The site is also worth checking out for details of other nearby collieries. *Jim Longworth*

Coming Events

APRIL 2001

1 Wee Georgie Wood Railway, Tullah, TAS. Steam train rides - also on 14-15th - last operating day for season. Phone 03 6473 1229.

7 Puffing Billy Railway, Belgrave VIC. Climax 1694 will haul a special train to Lakeside and Cockatoo - its last run before being withdrawn for a major overhaul (which could last some years). Phone: (03) 9873 0420.

14-15 Miniature Railways Convention, Penfield, SA.

14-15 2001 Australian Narrow Gauge Convention, VIC. In Melbourne at The Performing Arts Centre of Mullauna Secondary College, Corner Mitcham & Springfield Roads, Mitcham 3132. Registration forms from PO Box 435, Sunbury 3429.

14-16 Alexandra Timber Tramway, VIC. Easter Rally with heritage steam trains, exhibits and market stalls, 1000-1600. Phone: 03 5772 2893

15 Cobdogla Irrigation & Steam Museum, Barmera, SA. Humphrey Pump Open Day. Phone 08 8588 2323.

20+ Australian Miniature Cane Locomotive Gathering - Brisbane, NSW Central Coast, Sydney, Illawarra, Wagga, Walhalla - 20 April to 7 May. Details from Mark Carney (02) 9644 1131 or Andy Roberts (07) 4954 1206.

21-22 Eveleigh Community Weekend, NSW. Open days at the former Eveleigh Railway Workshops to celebrate the heritage of the diverse community who were involved in the development of Eveleigh and its incarnation as the Australian Technology Park. 1100-1600 daily, ATP, Garden Street, Eveleigh

28-29 Richmond Vale Railway, Kurri Kurri, NSW. Hunter Steamfest 2001. Regular passenger trains from 1000-1600. Phone 02 4937 5344. 3801 Limited steam train operates from Sydney to Maitland both days.

29 Puffing Billy Railway, Belgrave VIC. Centenary Great Train Race. Phone: (03) 9754 6800.

MAY 2001

4 Puffing Billy Railway, Belgrave VIC. "Centenary Commissioner's Train" - travel the line in luxury with guided inspections of the depots, Menzies Creek Steam Museum and a pub lunch at Gembrook. Bookings essential, Phone: (03) 9754 6800.

9-18 Tasmanian Steam Train and Coach Tour. This tour includes the Don River Railway; Tasmanian Transport Museum, Hobart; Bush Mill steam train, Port Arthur; Abt Wilderness Railway, Queenstown; Zeehan Pioneer Museum; a ride on the Wee George Wood Railway, Tullah; and a steam train tour from Burnie to Don River. Information and Bookings, Tastrips on 1800 777 726.

10 Puffing Billy Railway, Belgrave VIC. Mother's Day Luncheon Special - A special Luncheon Train departs Belgrave at 12 noon. Bookings Phone: (03) 9754 6800.

19-20 Richmond Vale Railway, Kurri Kurri, NSW. Modal exhibition with train operations. Phone 02 4937 5344.

20 Cobdogla Irrigation & Steam Museum, Barmera, SA. Steam Open Day. Phone 08 8588 2323.

20 Bennett Brook Railway, Whiteman Park, WA. Friends of Thomas the Tank Engine Day - fun for the whole family. Phone 08 9249 3861.

JUNE 2001

1-2 Jingle Bells in June Night Train. Enjoy a Night Train and three-course meal in the Winter. Also operates on 8-9, 15-16, 22-23 and 29-30 June. Bookings phone: (03) 9754 6800.

10 Cobdogla Irrigation & Steam Museum, Barmera, SA. Humphrey Pump Open Day. Phone 08 8588 2323.

10-11 Richmond Vale Railway, Kurri Kurri, NSW. Coalfields Steam Weekend. Phone 02 4937 5344.

16-17 Red Cliffs Historical Steam Railway, VIC. Centenary of restored Kerr Stuart 0-4-2T (B/N 742/1901). Located 10km from Mildura. Phone (03) 5024 2262.

Heritage & Tourist

News items should be sent to the Editor, Bob McKillop, Facsimile (02) 9958 8687 or email, to rfm@enternet.com.au; or by mail to PO Box 674, St Ives NSW 2075.

NEWS

Queensland

HUNSLET WAR DEPARTMENT 4-6-0T LOCOS 610mm gauge

During the First World War, Hunslet Engineering of Leeds built some 155 small 4-6-0T locomotives for operation on 60cm War Department lines in Europe. They were specially designed for light axle loading on temporary tracks laid behind fighting lines for the transport of munitions and stores. Fifteen of the War Department locos came to Australia for use on sugar cane tramways in Queensland and an additional unit was built to this design in 1925 for Kalamia sugar mill. Five locos have been preserved and their current status is as follows:

Australian Narrow Gauge Railway Museum Society, Durundur Railway, Woodford, QLD. Ex Cattle Creek Mill No.2 is in open storage awaiting restoration. Previously identified as Hunslet 1229 of 1916, there have been reports that it was rebuilt with a replacement chassis obtained from a northern sugar mill following a collision with a QR train in late 1956. Following a detailed examination of the locomotive in January 2001, there is a suggestion that this chassis may have been from Hunslet 1240 of 1917 from South Johnstone Mill.

Proserpine Historical Museum Society, QLD. Ex Proserpine Mill 2, *DIGGER* (1317 of 1918) is stored under cover and will eventually be restored for display at the new museum that was opened in the town recently.

David Revell, Wee Waa, NSW. Ex Gin Gin Mill 306 (1218 of 1916) is stored under cover as part of an extensive machinery collection. This loco has been purchased from a private owner at Frankston in Victoria, where it had been preserved in working order.

Alan Robert, Capalaba, QLD. Ex Invicta Mill 314 *INVICTA* (1215 of 1916) is stored under cover. It is believed that some disassembly work has been done on this long-term restoration project. The Australian War Memorial has expressed particular interest in this loco as there is definite evidence that it was operated by ANZAC troops during its War service.

Eton Progress Association, QLD. Ex North Eton Mill No.4 (1239 of 1917) is stored under cover in anticipation of a local restoration project.

John Browning; Ian Hughes, 2/01

LAHEYS CANUNGRA TRAMWAY TUNNEL CENTENARY

The hand-hewn unlined 1901 tunnel through the Darlington Range between Canungra and the Upper Coomera valley is the most visible reminder of the Lahey's timber milling undertaking in Canungra and its timber tramway. Five miles (8km) of track had been laid and a number of bridges built, by 1903. The tramway system eventually totalled sixteen miles (28km). Lahey's sold their sawmill in the 1930's and the tramway was removed in 1935.

On 21 January 2001, combined celebrations were held in Canungra to commemorate the Laheys Canungra Tramway Tunnel Centenary and the Centenary of Federation. Around 250 people attended the celebrations. The Canungra Information & Historical Association received $40,000 in Federal and State 'Centenary of Federation' Grants for the grading and surfacing of walking tracks, interpretive signage, a picnic shelter and road signage. The Canungra Loins Club had contributed much of the labour for the project. All speakers highlighted the role of the project in drawing the community together, their strong involvement in the project and the strong link between development, railways and Federation. In recognition of their involvement in the project, commemorative clocks made from sleepers from the original tramway were presented to the Beaudesert Shire Council, Kokoda Barracks (Land Warfare Centre) and the Canungra Lions Club.

Following the formal ceremony, the rest of the day was occupied with Centenary of Federation celebrations in Canungra where there were displays of photographs of the mill operations and models of Shay and Climax locomotives. The organisers stated that in excess of 50 descendants of the Lahey family were in attendance. The LRRSA recent publication on Lahey's Canungra Tramway was available and appeared to be making brisk sales.

Greg Stephenson, 2/01

MOUNT MORGAN TOURIST RAILWAY 1067mm gauge

A visit in mid-December 2000 found the restored Hunslet 0-4-0ST (854 of 1903) in the shed looking well maintained. Several locals were restoring handcars, etc., in the shed under a grant for training/employing long-term unemployed (LR 156, p.28). They indicated that the railway would again be operational by autumn 2001, and this was also reported in a WIN TV News item.

Lynn Zelmer 1/01

ROGER ANDERSON, Wonga Beach 610mm gauge

Privately owned Hudswell-Clarke 0-6-0 B/N 1838 of 1950 (ex-Victoria Mill *SYDNEY*, ex-Mossman Mill *BALLY HOOLEY TOO*) has joined the collection of 610mm gauge equipment at Pinnacle Village, following several years of storage at Port Douglas. The locomotive is still in good order, with light maintenance being carried out.

Work is progressing on former Mossman Mill Fowler 0-4-2T *IVY* (B/N 15947 of 1922) with its running gear recently removed and found to be in very good condition. It is thought that *IVY* may have been overhauled shortly before being set aside. Roger Anderson 2/01

Hudswell-Clarke 0-6-0 SYDNEY *is unloaded at its new home at Pinnacle Village, Wonga Beach.* *Photo: Roger Anderson*

Heritage & Tourist

New South Wales

COCKINGTON GREEN SCENIC RAILWAY, Canberra, ACT
305mm gauge
A visit to Cockington Green in February 2001 found the 0-4-0WT + tender locomotive built by Colin Wear from Fowler drawings (see LR 139, p.31) hauling two bogie carriages, each seating 8 adults The loco is fuelled by LPG. The track is an oval approximately 100 metres long, fairly level, and passes over two truss bridges crossing pedestrian underpasses, which provide access to the picnic area and international display area. The track also passes over a small pond that feeds a waterfall. Each ride consists of two circuits of the track. There are no sidings or storage areas and the loco is refuelled via a pipe next to the track. The loco and carriages are very well presented in highly polished green and red paintwork. The ride is very popular and most visitors seem to have at least one ride.
Chris Stratton, 1/01

CORRIMAL SHOPPING CENTRE, Wollongong 1435mm gauge
Further to LR 152, p.28, ex-South Bulli Colliery 0-6-0ST No.4 (Avonside 1574/1909) has been returned to static display at this site following overhaul by Wollongong City Council. The loco is in the open and it protected only by a 1200mm fence. It looks very smart, with the cab, saddletank, smokebox and cylinders finished in an apple green similar to 3801. The buffer beams, wheels, rods, crossheads, piston rods, top of dome and safety valves are in red, with buffers, funnel and footplate finished in black. The various brass plates have been polished. The right hand side of the loco (which faces the road) has the *SOUTH BULLI* name plate on the saddle tank, builder's plate on the bunker, and "No 4" on the cabside. There is also a Lion's Club plate on upper side of cab and a plaque giving the history of the loco on the sandbox beside the smokebox. The left-hand side only has the Lion's Club and "No.4" plates fitted.
Chris Stratton, 2/01

ILLAWARRA TRAIN PARK, Albion Park 610mm gauge
Illawarra Light Railway Museum Society
LEICHHARDT, the 0-6-0DM advertised for sale in September 2000 (Bg/DC 2393 of 1952, see LR 155, p.28), has been purchased by the Lynton & Barnstaple Railway in the United Kingdom. It will be moved to its new home later in 2001.
Bob Darvill, 2/01

JOHN DUNLOP, Bermagui
John Dunlop (who is believed to have built ten tourist railway locomotives in Sydney in the 1970s and 1980s), has recently resumed locomotive construction, in Bermagui on the far south coast of NSW. Currently under way is a 457mm gauge steam outline 0-4-0PM for Weston Park, Yarralumla, ACT, together with carriages and pointwork. John is hopeful that other projects currently under discussion will lead to more orders being placed.
John Dunlop via John Browning 2/01

MILLENIUM PARK RAILWAY, Newington 610mm gauge
Two recent visits to the former naval armament depot, on 18 December 2000 and 18 February 2001 found the railway virtually inoperable, due to extensive flooding, with rails covered by various combinations of sand, rubble, baked earth, mud and water. Landscape changes and damage to drains over the past two years have caused run-off to stay in many areas that previously had no problem.
Tracks damaged by heavy truck movements, when neighbouring industrial land was being remediated, have mostly been reinstated. The southern trackage to the Holker Street boundary remains water-logged, with the ballasted track barely visible.
No attempt was made to operate any 'electros' (BE locomotives), as the line from the depot to Lab A (refer map on page 24 of LR 150) and the wharf is out of commission. The track laid in concrete from Lab C to Building 45, which was water-blasted last year, is again littered with rubbish, from the sides of the cutting.
On a more positive note, 30 November saw the arrival of 640 metres of track and seven sets of points from the Smithfield Munitions Railway, South Australia (see page 10, LR 148). The 20lb rail, with hessian bags of fishplates, was unloaded by day labour on 1 December and stacked on eight bogie wagons at Buildings 7 and 18. A forklift was used as motive power and stacking unit (being more convenient than the 'electros').
With the acquisition of more rail from another source, the gap between Buildings 39 and 45 will be joined, to make a loop for tourist operations.
No time frame is currently known for this programme, for many hundreds of metres of the existing railway will need rebuilding to bring it to an accreditation standard.
Len King 2/01

SILVERTON RAILWAY STATION
1067mm gauge
The former Silverton Tramway Company station at Silverton remains intact with a water tank and the mainline still existing, along with the points either end of the yard, but the building is in poor condition and neglected. It features a pen, surrounded by geese, ducks and other feathered creatures! Former STC 2-6-0 Y11 (BP 3535 of 1893) is on static display in Penrose Park Silverton, but there is no apparent link to the railway station.
A small 4wBE mine locomotive numbered TB2 is on static display at Silverton Gaol. This loco is actually loco TB1 with battery box TB2, with the corresponding components constituting a locomotive believed to be at the Line of Load Museum in Broken Hill.
Brad Peadon, 2/00; John Browning

Tasmania

Abt WILDERNESS RAILWAY
1067mm gauge
A visit on 27 January found oil-fired 0-4-2T *KLONDYKE* (Perry 271 of 1927) in service hauling passenger trains. Construction of a turntable was in progress to the east of the station building. Former Mt Lyell Mining & Railway Company 0-4-2T Abt locomotive No.3 (Dubs 3739 of 1899) had arrived back at Queenstown (LR 157, p.31).
No.3 began running in revenue service on Friday 9 February between Queenstown and Lynchford. The official reopening of the rack section and the extension of the trip to Rinadeena was scheduled for Wednesday 14 February 2001, but was postponed a day due to technical problems with No.3.
At 10.20am on 15 February, No.3 and two coaches ('Myrtle' and 'Blackwood') departed Queenstown with the first public train to Rinadeena since 1963. After a swift run down to Lynchford, No.3 took water before heading off to Halls Creek and the rack section. Excitement rose amongst the 30 or so passengers as the loco barked up the 1 in 50 from Halls creek to the bottom of the rack. Just before the rack section, the rack engine unit was run to warm it up (sounded like a horrible wheel slip!!!), signalling the approach of the rack section.
After entering into a rainforest shrouded cutting just past the site of the old Halls Creek station, the loco engaged the rack for the climb up the 1 in 16 grade to Rinadeena. Quickly, the loco settled into the rack section with the four cylinders working away - the sound of both engine units working reminds one of a Garratt locomotive pulling hard going in and out of beat. What a sound as we climbed the hill finally before rolling to a halt in the new station - the first public train in 37½ years had finally arrived at Rinadeena. The train went back down the top of the rack section twice for TV runpasts before taking water and running around. Finally, we set off back down the hill. After engaging the rack, another steam sound unique to this train in Australia became dominant - the sound of the Le Chatelier Steam Counter Pressure Brake where the timing of the piston valves is altered to convert the cylinders to compressors - a bit like an engine brake in a truck. This is used to control the descent of the train down the steep gradient without using the vacuum brakes.
From the bottom of the rack, we rolled smartly down to Halls Creek before commencing the gentle climb along the banks of the Queen River to Lynchford. After a few minutes wait, giving *KLONDYKE* time to get out of the platform with its normal public train after watering and running around, No.3 pulled the train into the platform. Here, No.3 and 'Myrtle' cut off and pulled across onto the main line, whilst *KLONDYKE* set back into the platform with coach 'Sassafras' and coupled onto 'Blackwood' for the run back to Queenstown.

No.3 stayed at Lynchford to work back to Rinadeena on driver training trips - altogether they had previously done about 30 trips up the rack, much of it under the eye of local former Mount Lyell driver "Bodgie" Castles, who is tutoring the crews on the rack. This was a really great occasion for the West Coast, Tasmania, and all railway enthusiasts in Australia. With the first section of the rack now open, this truly is now the beginning of the Abt Wilderness Railway.
Ian Hughes, 2/01; Rob Bushby, 2/01

WEE GEORGIE WOOD, Tullah
610mm gauge
A visit to Tullah on 18 November, 2000 found 0-4-0WT *WEE GEORGIE WOOD* (Fowler B/No. 16203 of 1924) steamed specially for a visiting group of railway engineers. It operated a service with a wagon and the Comstock passenger car on loan from the Zeehan museum. The track is 1.6km long with a balloon loop at both ends. It meanders past the backyards of Tullah down to a clear area beside the road. It has a fairly steep grade in the centre section, which allows the passengers to experience the locomotive really working.
It is hoped to extend the track a further 1.5km along the shores of Lake Rosebury. The storage shed is beside the highway with open sides to allow passers by to see the rollingstock even when the railway is not running. The ex-Lake Margaret Tramway passenger car was noted in the shed along with the underframe of Krauss 5988 of 1908, the boiler of which sits in the car park.

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The mine at Rosebury is very supportive of the project and has donated numerous skips that are stored nearby.
The steam season is from late August through to Easter each year, with 2-3 operating days per month. Dates are given in the Coming Events calendar. David Jehan, 1/01

STATE MINE RAILWAY HERITAGE PARK
City of Lithgow Mining Museum Inc.
1435mm gauge

The State Mine group hosted the LRRSA and other researchers into the history of the Lithgow iron & steelworks (LR 156, p.27) on 14 January 2001. A conducted tour of the various sites that make up the heritage park concept provided an appreciation of the overall business strategy behind the venture and the progress that has been achieved over the past year. The concept links a number of heritage sites - Lithgow State Mine, the site of Australia's first modern iron blast furnace, Lake Pillens, Eskbank House (the Lithgow & District Historical Society), and the former Eskbank goods yard, railway station and locomotive depot of the Government railway system - through the rehabilitation of former industrial railway lines. Current developments to link these attractions with the Zig Zag Railway will create the largest cultural heritage precinct in the State.

The newly erected poppet head dominates the State Mine site at Lithgow. The railway sidings and carriage shed are behind.
Photo: Bob McKillop

The State Mine site has recently been transformed by the erection of the ex-Newstan Colliery poppet head over the downcast shaft (see LR 156, p.30). The former administrative building houses the interpretative side of the mining museum, and there has been considerable progress in upgrading the standard of the displays. Features include a working lamp room display, a historic collection of miner's lamps and a pit pony and horse harness display. A cable-drawn mine transport recovered from the workings of the Lithgow Valley Colliery four years ago is currently being restored for display in the museum. The former bathhouse and powder magazine are undergoing conservation and restoration works and the bathhouse will soon be ready to house a selection of mining machinery.
On the railway scene at this site, Zig Zag Railway fitters are undertaking repairs to ex-Commonwealth Cement 2-6-2ST 2605 (Dubs 2794/1892) to enable accreditation. Ex-BHP Port Kembla D23 (EE A040/1963) is the main workhorse at present. Sister locos D20 and D21, currently at Port Kembla, will be transferred to Lithgow, while D24 will be stripped for spare parts.
The operating ex-State Rail railcars, 661/761, were being prepared for repainting. The plan is for the railcars to operate tourist services between Zig Zag Railway and Eskbank station. From here, passengers will join State Mine end-platform cars on a loco-hauled journey over the new line past Blast Furnace Park and Lake Pillens platform to State Mine. Work was to recommence in late January to complete the new trackwork over this section, while the former Tarana water tank and a water column have recently been installed at Lake Pillens. The passenger carriages are still under restoration, however, and State Mine is seeking alternative vehicles for the commencement of passenger services. Metal interpretative signs have been made for interpretation of the Blast Furnace site and a visitors centre is schedule for completion here by late 2001.
It is planned to run industrial-type goods trains over the line on a regular basis. These will be made up of 4-wheel S-trucks and ex-Portland cement works hoppers (see LR 141, p.25) and, once sufficient vehicles have been restored, will generally be located at Eskbank station as an introduction to the heritage park.
Eskbank House, the fine sandstone home built by Thomas Brown in 1842 and which had a close association with the Hoskins' blast furnaces, is also undergoing a facelift with Centenary of Federation funding. Ex-Hoskins 0-4-0ST *POSSUM* (Manning Wardle 1802 of 1912), currently on static display in the grounds, will be repainted. There are long-term plans to restore it to operating condition.
Overall, the cultural heritage precinct being developed at Lithgow is an exciting and ambitious project. It has been conceived from a sound analysis of the tourist potential of the precinct and the specific activities have been developed from a business strategy linked to tourism in the Blue Mountains Region. Moreover, the effort is led by people with the vision and management skills to bring the concept to reality. *Light Railways* wishes them all the best in their endeavours and will cover developments at Lithgow on a regular basis. Editor, 1/01

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WEST COAST PIONEERS MEMORIAL MUSEUM, Zeehan

The ex-Mt Lyell Mining & Railway Company Daimler railcar is being restored to operating condition for use on its old line. Built in 1922 on a lorry chassis for use by the MLMRC general manager, this unique 4-wheel vehicle saw service until closure of the line in 1963. A Bedford engine was installed in 1949-49, so the restoration group is seeking an engine that is similar to the original Daimler motor. The original Daimler radiator has been discovered in storage. The railcar will remain the property of the West Coast Heritage Authority, who plan to operate it on a section of the Abt Wilderness Railway as a revenue-raising venture.

West Coast Heritage Authority Newsletter, via Mark Plummer

NORTH-EAST DUNDAS TRAMWAY RAILTRAIL, Melba Flats

We have received two reports of treks in January 2001 along this railtrail, which uses the formation of the former Tasmanian Government Railways 2ft gauge North-East Dundas Tramway. Mark Plummer rode the rail by bicycle and Ian Hughes transversed it by 4-wheel drive vehicle. The railtrail has been cleared from both the Melba Flats and Williamsford end and is suitable for walking, cycling and 4-wd vehicles. From the Williamsford end you can drive over 14km of the formation by 4wd vehicle to within 100m of the Montezema Falls. However, about 100m section of the formation near the falls has been reduced in width to about 50cm by a landslide. This, and the lack of a bridge across the falls, prevent a through journey by vehicles.

Mark found it easy to cycle along the formation. There was one old railway bridge intact enough to walk over by keeping to the beams. On the walking section after the landslide, Ian reports the formation survives in reasonable condition, with evidence of ballast and a surprising number of sleepers still in situ. Mark noted intact sleepers that retain dogspikes spaced two feet apart! At the falls a number of rock-bolts had been newly installed,

Hunslet 4-6-0T (1218 of 1916) ex-Gin Gin Mill 306, stored under cover at Wee Waa, January 2001. Photo: Ian Hughes

4wBE mine locomotive TB2 (carrying the battery box of TB1) at the Line of Load Museum, Broken Hill. Photo: Ray Graf

Abt No.3 at Rinadeena, 15 February 2001, with the first public train to visit there in 37½ years. Photo: Rob Bushby

WEE GEORGIE WOOD *and crew relax between runs, on Saturday 18 November 2000.* *Photo: David Jehan*

Alexandra Timber Tramway, Vic: On the day of its arrival, 23 September 2000, the Matisa Tamper (formerly from Cattle Creek sugar mill, Qld, then Gators Magoon, Porepunkah Vic) poses with Hudswell Clarke 1555. Photo: Peter Medlin

Walhalla Goldfields Railway, Vic: Bridge 6, newly restored (to its original style, as a 'fish belly' bridge), seen from the road on the opposite side of the valley, 18 November 2000. *Photo: Peter Medlin*

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suggesting the construction of a suspension bridge. Mark came across about 20 international backpackers on the trail, as it is written up in many guidebooks as a wonderful walk to Tasmania's highest waterfall. From the end of the formation near the falls, there is a boardwalk to the falls themselves. Here some fallen timbers in the gorge provide a reminder to the former railway bridge.
Mark Plummer, 1/01; Ian Hughes, 2/01

South Australia

PORT MILANG HISTORIC RAILWAY MUSEUM

1600/610mm gauge

This museum commemorates the contribution of the railway to the port town of Milang on Lake Alexandria. A visit on 12 February found a most impressive museum with a number of new features. Ex-Adelaide Red Hen railcar 406 is now located there on broad gauge, while a kilometre of 610mm gauge track is to be laid to connect the railway yard with the jetty. This was formerly a horse-worked 1067mm gauge line. A 2ft gauge diesel has been obtained for this line. Brad Peadon 2/01

Victoria

PUFFING BILLY RAILWAY

762mm gauge

Emerald Tourist Railway Board

Saturday 7th April looks like being the last run of the PBR Climax for quite a while. It is doing a special final run on this day, departing Belgrave at 9.00am. Costs are anticipated to be $45.00 for Belgrave to Lakeside, with $20.00 for Lakeside to Cockatoo. Money raised will go into an account for repairs to the Climax, which are being estimated at the least at $30,000 (of course when it's pulled apart this seems to triple or more). It also has to be slotted into the workshop program.

For further details, contact Booking Officer, Jeff Goodwin, on (03) 9873 0420. This will be the last chance to ride behind a CLIMAX loco on the mainland for quite a while.
Peter Medlin 2/01, Frank Stanford 2/01