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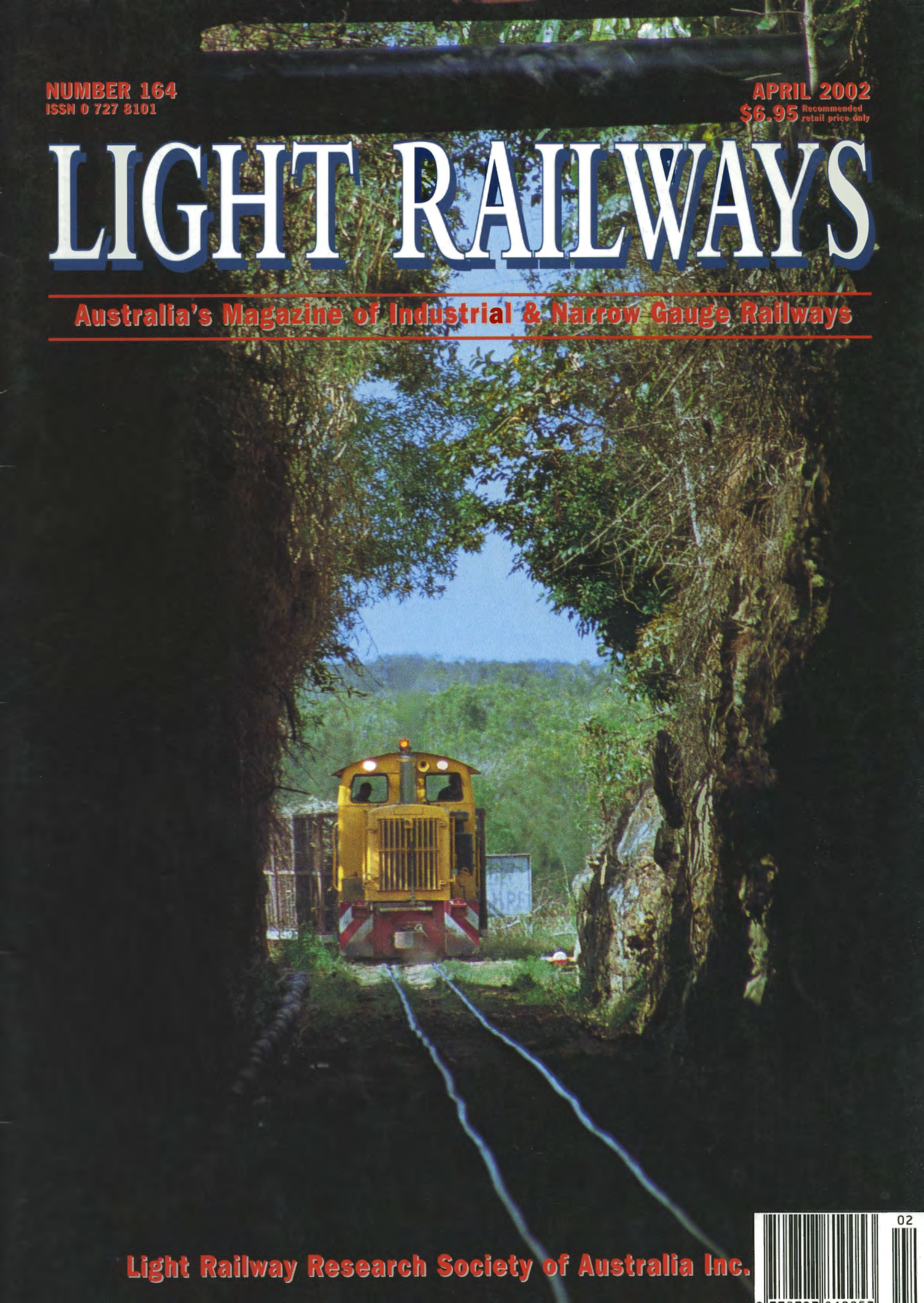
LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



Light Railway Research Society of Australia Inc.

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

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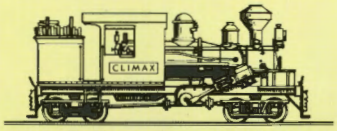

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1 inch (in)	25.40 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metres
1 mile	1.60 kilometres
1 super foot	0.00236 cubic metre
1 ton	1.01 tonnes
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts
1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

Contents

Comment

As I once said, in a previous Editorial, the production of *Light Railways* is essentially a labour of love. Virtually all of our magazine's content is contributed voluntarily by our readers.

This creates a rather challenging situation since we, as editors, have little or no control over what comes in. We can say *no thanks*, or *yes*, or a qualified *yes*. We can edit sections, or add some photos, but we can't choose the subject matter, as the editors of a 'mainstream' magazine can, unless we write the article ourselves!

With LR 139 (our first issue) we used everything publishable that we had on hand to fill the magazine. We were a little concerned as to how we'd go with LR 140, but articles and news turned up when we needed them and, even today, a wide variety of material continues to trickle in.

We currently have enough major articles to see us through into next year, though we're always in need of shorter pieces (particularly if they have colour shots) to provide some variety in each issue, and we're in need of material from places other than NSW (which currently represents over half of our *Work in Progress* list).

We look forward to hearing from you. *Bruce Belbin*

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

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

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

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

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

Front Cover: *Moreton Mill's Com-Eng 0-6-0DH* JAMAICA *(B1112 of 1956) hauls its load of cane towards Bli Bli cutting, 7 September 2001.* JAMAICA *originally worked on the Queensland Government Railways' Innisfail Tramway, as DL14* JOHNSTONE. *It was sold to Mourilyan Mill in 1977, becoming their number 8, then was transferred to Moreton in 1984. Photo: Brad Peadon.* ***Upper Back Cover:*** *Moreton Mill's lightweight EM Baldwin 0-4-0DH 'twins'* MAROOCHY *and* VALDORA *(6-1064-1-11-64 of 1964 and 6-1258-1-6-65 of 1965) pass the Horse Line points as they approach the River Depot with a short rake of eleven bins on 11 December 1980. Photo: John Browning.* ***Lower Back Cover:*** *In the steam era, Moreton Mill also possessed a set of 'twins'; the Fowler 0-6-0Ts* COOLUM *and* EUDLO *(16036 of 1923 and 16207 of 1925), seen here in the mill yard taking a break between duties, on Thursday 15 September 1966. Photo: Robert Kingsford-Smith.*

During the 1998 crush, in a time honoured scene, Moreton Mill's EM Baldwin 0-6-0DH PETRIE *(6-2300-1-6-68 of 1968) hauls a long rake of loaded cane bins across Currie Street, Nambour, and up the short grade along Mill Street leading to the mill yard. Photo: Ron Preston*

Nambour Sugar

by Ron Preston

Throughout its length, the coastal plain of Queensland is famous for a wide range of primary produce. However, of all the crops, sugar cane is particularly predominant and, wherever rainfall is sufficient and suitable fields exist, tall stands of cane wave in the hot sun. The 'crush', the harvest season, sees an army of harvesters and cane haulouts head into the fields. With the tall canes cut, the transport of the harvest to the mills begins. Most sugar mills established small 2ft gauge railways to carry out this task and acquired their own fleet of diminutive locomotives and four-wheel cane trucks.

In the era when cane was cut in long stalks, the trucks were simple four-wheel flat-tops with retaining rails at each end. As mechanised harvesting was introduced, the resulting short lengths of chopped cane were best handled in wire 'bins', with a four-wheel underframe being the normal base.

To haul the long rakes of cane trucks, horses, the original power for small mills, were soon supplanted by steam locomotives, and these were used for more than half a century. From around 1950, diesel engined locomotives were introduced in earnest and, as their numbers grew, steam disappeared from the sugar lines. One of the last mills to employ steam was the Moreton Central Mill, situated at Nambour, some 100 km north of Brisbane. Sugar cane had been grown in the fertile fields of the surrounding district, and a number of small mills had been built, as early as the 1860s. In 1897, the Moreton Central Mill first fired its boilers and prepared to handle the harvest, initially from plantations to the west of the town. Expansion soon took place into the lush river flats which lay between Nambour and the coast. Blessed with long golden beaches, caressed by the waters of the South Pacific, this popular tourist destination today glories in the name of 'Sunshine Coast'.

While horses had been able to handle the short western lines, a more powerful means of traction was necessary for the rapidly developing eastern areas, the first two-mile section of which had opened in 1902. For the 1904 crush, with the eastern system having grown to some five miles of main line, the mill acquired a Krauss 0-6-0T steam locomotive (4687 of 1901) which it named *MORETON*. The western lines were now climbing into the hills and both steep grades and sharp curves were employed. To cater for this traffic, a small 'A' class Shay geared locomotive (Lima 2091 of 1908) was obtained and given the name *DULONG*. From 1915, this locomotive, together with much of the hill-climbing line, was taken over by the Maroochy Shire Council.

More steam locomotives were ordered, to provide for the rapidly developing eastern lines, *MAROOCHY* a 15-ton 0-4-2T arriving from Hudswell Clarke in 1914. In 1923 and 1925 two 0-6-0T locos were purchased from John Fowler of Leeds (16036 of 1923 and 16207 of 1925) and these became *COOLUM* and *EUDLO*. In 1944, the Shay locomotive re-entered the mill fleet, bringing with it a sister, *MAPLETON* (Lima 2800 of 1914), which had been purchased by the Shire. The pair was later 'cannibalised' to produce one sound machine which, although predominantly comprised of parts from the original *DULONG*, was known simply as *SHAY* in its later seasons.

One of the more unusual acquisitions was *VALDORA*, a small 0-4-0 inverted saddle tank loco, which had been built by Dick Kerr in 1893. It was purchased from the Racecourse Mill, in the Mackay district, in 1937.

As a stop gap measure to handle the heavy traffic of the period, two second-hand 0-4-2T Fowlers were added to the fleet in 1959-60. Purchased from Babinda Mill, near Cairns, they became *BLI-BLI* (14418 of 1915) and *PETRIE* (19930 of 1933). A number of small petrol and diesel locomotives had been acquired over the years, and these proved useful in shunting and work train duties. Cane haulage on the lighter branches also kept them employed.

The system reached north to Valdora, north-east to Coolum, and east to Maroochy and the area around Diddillibah. Within this area were some fascinating features.

In the early years, the mill operated a limited passenger service, running to Deepwater and to Coolum. The former trains ceased running in 1927, but the Coolum run remained until 1935.

The mill had been constructed adjacent to Queensland Railways' main northern line, and included an exchange siding with the government system in Nambour goods yard. However, the main business district developed east of the mill yard and it was soon necessary for cane trains to make their way down the centre of first Mill Street and then Howard Street as they took the empties back to the fields.

The return workings, with long lines of loaded trucks, roused the shoppers as the small locos stormed the hill to the mill yard. Following a slight deflection caused by the mis-alignment of these two thoroughfares, the line crossed Currie Street, for many years the busy Bruce Highway, as it too made its way through the town centre. Traffic lights, activated by

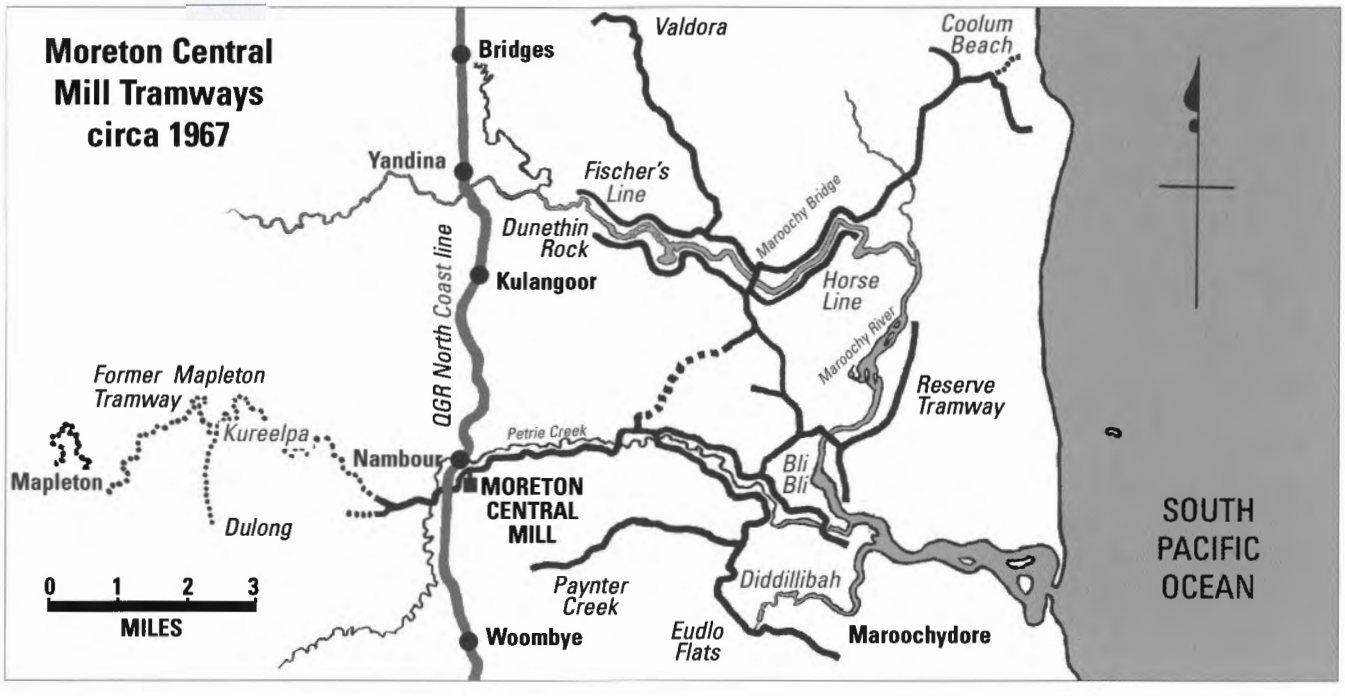
Probably the best known, and most photographed, of all the Moreton locomotives were the twin 0-6-0T Fowlers purchased in the 1920s. Here, COOLUM, *the elder of the two, hauls a mixture of empty whole-stick trucks and bins for machine-cut cane. Photo:Ron Preston*

In August 1967, younger sibling EUDLO *enters the mill yard hauling trucks loaded with whole-stick cane. The Fowler twins always hauled loaded trains bunker first.* *Photo:Ron Preston*

EUDLO *takes water from the tank at the entrance to Howard Street yard, August 1967.* *Photo:Ron Preston*

approaching trains, assisted in controlling movements. It became usual, as it still is, to follow each loaded train up the hill with a 'bank' engine, both to add tractive effort and to protect against any break-aways of the unbraked and loose-coupled cane trucks.

Once at the staging yard at the foot of Howard Street, the main line heads out along the valley of Petrie Creek, wide fields of cane flanking it on both sides. After a journey of about 5km, the first junction is met, with a branch turning south to serve the fields of the Diddillibah and Paynter Creek areas. Still heading east, the main track pierces an outcrop of the Bli Bli Range by a narrow deep cutting whose steep sides were carved with just enough width to pass a stick of cane laid across the original flat cars. Once clear of the cutting, the line again junctions with branch lines to Coolum, Valdora and Dunethin Rock. This last line stays south of the Maroochy



River but passes through some farm areas and then across a pleasant riverside park. To reach the other two branches, the track crosses the river by a low-level timber trestle, which includes a lifting span across the channel so that any river traffic can pass.

Past the junction at Bli Bli, the line crosses the Maroochy River on the southern side of the road bridge. Further south, another lifting span, Charlies Bridge, brings trains across a small stream to give access to the fields adjacent to the Maroochydore-Nambour road.

A necessary consequence of running steam was the provision of large elevated water tanks at strategic points along the system so that the tank engines could replenish their supply. As most of the terrain was flat, a means had to be devised to pump the plentiful supplies into these tanks. Each locomotive was fitted with additional pipes to provide a steam outlet from its boiler and, whenever they stopped at a remote tank, this pipe was connected to a steam-operated pump beneath the container. When an engine stopped to let water gravitate into its tanks, the steam system was connected and, simultaneously, fresh supplies were pumped in for next time.

Diesel locomotives began to appear at Moreton Mill from 1963 and, for the 1965 crush, four such locomotives were in use. With the introduction of this modern power, the older steam locomotives were gradually withdrawn.

The 1967 crush proved to be the last for Nambour's steam locos. Both *EUDLO* and *COOLUM* were in daily use while *MORETON* was in steam for the first six weeks before being set aside. It joined *BLI-BLI* on the storage road near the railway station. *PETRIE* was 'stand by' engine, but saw little employment. By this stage, the Shay was preserved on a short piece of track in the mill yard, while *VALDORA*, having been displaced two years earlier, had been installed in a local park.

From this season, the gradual introduction of mechanical harvesting saw an increase in the number of the cage-like bins being used, while stick cane continued to be hauled on the old-style wagons. A feature of the haulage of stick cane was the 'sweeping' action of the overhanging canes. The long lengths tended to sag at the ends and each train acted like a long broom, cleaning the ground beside the slim rails as it progressed towards the mill.

At the close of the 1967 season, all steam was withdrawn, a surprising number of locos passing into preservation of some sort. *COOLUM* was placed on a short section of track to become an attraction at The Big Pineapple (a tourist attraction south of Nambour). It has since been moved to a private property at Eudlo. *MORETON* suffered a different fate. Fitted with a diesel engine in its attendant tender, the old Krauss 0-6-0T gives rides for visitors to the Ginger Factory at Yandina. *BLI-BLI* was placed in a park in the area from which it gained its name but, unfortunately, the proximity of the tidal Maroochy River has created a corrosive atmosphere that is not conducive to a long life expectancy.

The Moreton Central Mill, however, decided to keep the Shay and *EUDLO* as mementos of the great days of steam and, today, both rest out their retirement under the trees at the entrance to the mill yard.

The line to Coolum, Valdora and Fischer crosses the Maroochy River by means of a long trestle, which incorporates a lifting span. In August 1967, the last year of steam operation, COOLUM *heads north across the river with a train of empty bins and wagons.* *Photo: Ron Preston*

Besides the ubiquitous Fowler twins, Moreton Mill operated a fascinating variety of vintage motive power in the 50s and 60s. ***Clockwise, from above:*** *Krauss 0-6-0T* MORETON *(4687 of 1901) was its namesake mill's first locomotive. Believed to have been originally ordered by Proserpine Mill, who then couldn't pay for it, it arrived at Moreton Mill in 1904 and worked there for over sixty years.* ❑ *4wPM* JOE *was one of three Malcolm Moore locos with Ford V8 engines to operate at Moreton. Though its siblings,* SANDY *and* JIMPY, *came direct from War Disposals,* JOE *worked for ICI at their Dry Creek plant in South Australia until purchased by Moreton in 1956.* ❑ SHAY *was the result of combining the best parts of 'A' class Shay locomotives* DULONG *and* MAPLETON, *with a new steel cab added.* ❑ *Fowler 0-4-2T* BLI-BLI *came from Babinda Mill, where it had been their number 1, in 1960.* ❑ MAROOCHY *was a Hudswell Clarke 'Tiuma' class 0-4-2T (B/N 1078 of 1914). At 15 tons in steam, and featuring 10in x 15in cylinders and 29in driving wheels, it was the most powerful steam locomotive to operate at Moreton.* ❑ *Dick Kerr 0-4-0IST* VALDORA *(built 1893) was purchased from Racecourse Mill in 1937, for use on the then lightly laid Valdora branch. It was replaced by a lightweight EM Baldwin 0-4-0DH in 1965. All photos: Ron Preston.*

Small but Powerful

W.A. Railways' Unique Job

from THE BHP RECREATION REVIEW *Vol XII No.1 1934, submitted by Jim Longworth, and reprinted by kind permission of BHP Ltd.*

A recent construction at the Midland Junction railway workshops, well worthy of note, is a small steam locomotive weighing 15 tons – for a Gold Mining Company at Leonora, which is about 536 miles distant from Perth. There it is to be used on the woodline of the Sons of Gwalia gold mine. Three other steam locomotives are in use at this mine, the most powerful of which hauls a load of 120 tons. The new engine, however, which, incidentally, has a gauge of 20 inches, and is the first of its kind to be built in Western Australia, is still more powerful. Considering its size it is a remarkable production.

The entire machine was designed and built at Midland Junction, Western Australia. The brass and iron castings were made in the railway workshops, and the steel castings at Hadfields (W.A.) 1934, Ltd. Imported boiler plates were used, but the frame plates were manufactured in Australia, and supplied by The Broken Hill Proprietary Co. Ltd.

In order to enable the relatively long wheelbase of 11-ft to operate successfully over curves of 80-ft radius, a special design of trailing truck was essential. Accessibility is always important in locomotive construction, and in this case where space was so restricted, it was of even greater moment. With this in view, every detail was carefully planned.

Features peculiar to this sturdy little loco are the coupling and connecting rods, which are fitted for grease lubrication. We understand this is the customary practice of the W.A.G. railways. A standard two-feed hydrostatic lubricator supplies the cylinders. Compensated brake gear operates on the coupled wheels. Independent bearing springs are fitted to the trailing truck, but the coupled wheel springs are compensated.

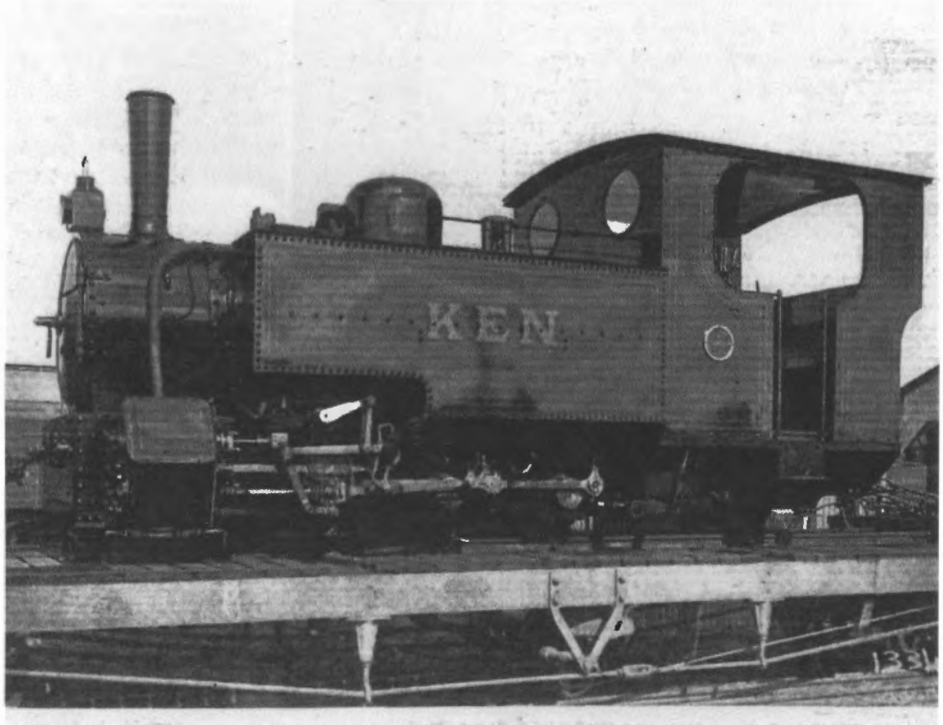
Owing to the very narrow gauge, the frames are placed outside the wheels, giving exterior axle-boxes. The crank-pins, instead of being fitted in the wheels, as on larger engines, are carried in cranks placed on the end of the axles. Self-cleaning doors in the ash-pan are reached through large openings cut in the frames. The top feed clackbox is similar to that fitted on the largest local engines, and was specially designed for this engine.

Locomotive men will be interested in the outside regulator and steam pipes, accessible valve gear, and the special construction of the steam chests.

Power for the Sons of Gwalia mine is generated in a self-contained plant with gas engines as prime movers. The gas for these engines is manufactured in large gas-producers from wood drawn from the surrounding country. As the mine has been in operation for many years, wood supplies near at hand have become exhausted, and the present source of supply is over 40 miles distant from the mine. In normal railway working, a distance of 40 miles seems very ordinary, but when the gauge is only 20 inches, such a distance makes the railway remarkable.

Obviously, expensive railway formation and ballasting could not be justified on a line of this character. B.H.P. 20-lb rails are laid on sleepers, most of which are half-round, being cut from the local mulga. Half-round sleepers have been used on railways intended to carry much greater loads.

As mentioned previously, three steam locomotives are already in use on the line, but the new engine surpasses these in power, and there is every reason for confidence that with its simple and sturdy construction, it will carry out satisfactorily the work expected of it.



THE COMPLETED ENGINE.
Loaded on truck ready for transport to the mine at Gwalia.

Leading particulars of the engine are given hereunder:-

0-6-2 type tank engine; gauge of rails, 20 inches; rails, 20lbs per yard; minimum curve, 80 feet radius; working pressure, 200lbs per square inch; cylinders, 9½in. dia. X 12in. stroke; coupled wheels, 2-ft diameter; bogie wheels, 1-ft, 8-in. diameter; tractive effort at 80 per cent W.P. – 7,220 lbs; rigid wheelbase, 5-ft 6-in.; total wheelbase, 11-ft; rail to C.L. of boiler, 4-ft 3-in.; rail to top of chimney, 8-ft 9-in.; total length over buffer beams, 18-ft 2-in.; maximum width over platforms, 6-ft 11-in.

HEATING SURFACE.

76 tubes, 13/4-in. outside diameter	289 sq, feet
Firebox	32 " "
Total	321 " "
Grate area	7.5 " "

Total weight in working order, 15 tons.

The Great Cobar Copper Mine

by John Shoebridge and Bob McKillop

4. The Lithgow Refinery

Introduction

In previous articles in this series, mention has been made of the Lithgow copper refinery, which operated between 1896 and 1911 in connection with the Great Cobar copper mine. In Part 2 (LR 154) it was noted that William Longworth, on behalf of the Great Cobar Copper Syndicate, made known the value of the residual gold in the Great Cobar copper ingots. He speculated that a refinery could recover this bullion to the benefit of the syndicate partners.

The immediate result of this disclosure was an increase in the price commanded by Cobar copper. The eventual outcome was the erection of an electrolytic copper refinery at Lithgow, the only such plant commissioned by a New South Wales copper mining company.

The line dividing the processes of smelting (the application of heat to ore to produce metallic copper) and refining (the further treatment of the metal to meet market requirements) is blurred. Initially it was expedient to do it all at Cobar, but as production increased and local (wood) fuel declined it was time to move part of the process to where cheaper fuel (coal) was more readily available.

Whilst the use of industrial railways around the refinery was a relatively minor feature of the overall operation, this works was an integral part of the Great Cobar operations and an important element in the history of the Australian copper industry. For the sake of completeness of the Great Cobar story, this article will examine the Lithgow refinery and its associated colliery from 1896 until their final demise.

The 1896 Refinery

William Longworth took a special interest in the challenge of enhancing the return from the Syndicate's copper through refining and it was no doubt on his recommendation that they determined to commission an electrolytic refinery to extract the bullion on their own behalf. Although a site had yet to be settled, any refining process would require access to coal, water and transport. The three locations considered were Singleton, Newcastle and Lithgow.

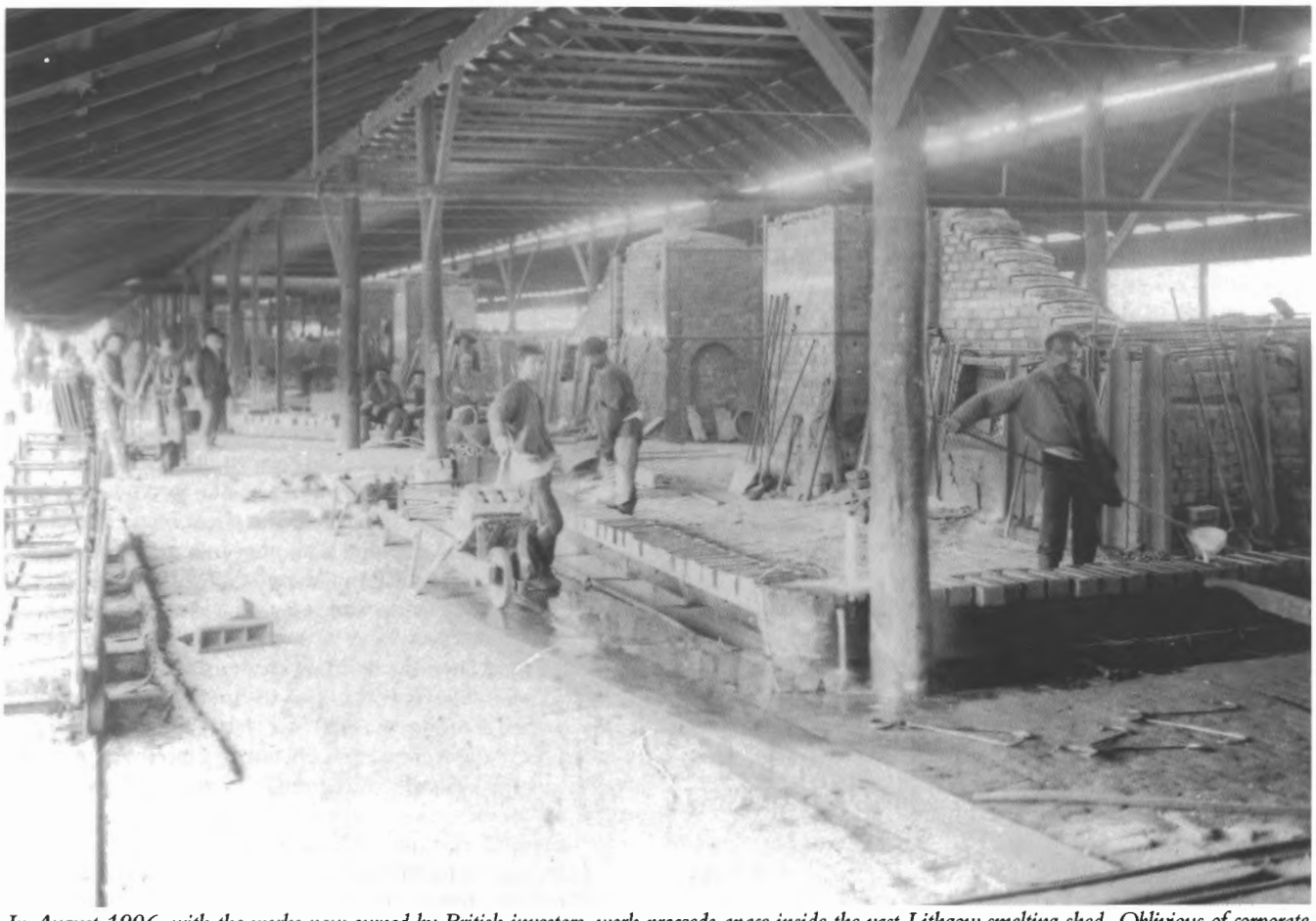
Singleton was where the Syndicate had their own coal mines and coke ovens but to use this location would have diverted the copper from a direct route between Cobar and the seaboard. Although Newcastle also involved a longer rail haul than the direct route to Sydney, it had a deep-water port and ample coal. Indeed the Longworth brothers themselves owned a large coal property nearby. Copper had been smelted here since 1850, so there would be an experienced labour force. Lithgow at the foot of the railway ascent over the Great Dividing Range, had long been established as a mining, industrial and railway town. It had ample coal and water, there were two copper smelters already at work, and it lay on a direct line between the mine (Cobar) and the port (Sydney). Lithgow would appear to have been the obvious location.

Despite the above logistical and technical considerations, a new works at Lithgow was by no means a foregone conclusion. At that time, the differential railway freight rates applied in New South Wales, drafted so as to divert goods traffic from interstate river transport, acted in favour of transport to the coast. Thus (so the Longworths claimed) it would have been cheaper for the Syndicate to rail copper matte from Cobar direct to Waratah (Newcastle) for treatment than to rail it the shorter distance to Lithgow.[1]

William Longworth lobbied the Government for a reduction in rail freight. Local agitation by Lithgow residents

The Great Cobar Copper Refinery, seen from the hills to the north of Lithgow, circa February 1907. The smelting shed dominates the scene, to the right beyond the water jacket furnace is the electrolytic tank house, which would be expanded in 1908, while steam rises from the power station. Five loaded trucks stand on the Ironworks Branch, whilst closer to the camera the slag dump advances towards Farmers Creek.

Photo Lithgow Regional Library



In August 1906, with the works now owned by British investors, work proceeds apace inside the vast Lithgow smelting shed. Oblivious of corporate takeover, furnacemen ladle molten copper from one of the reverberatory furnaces. The shape of the moulds indicates this is the refined product, presumably the hand-barrow will be used to move the cooled ingots to main line railway trucks. On the left, narrow-gauge trucks stands on the track leading to the tank house, in the lower right corner a glimpse of dual-gauge track. Photo NSW Government Printer; Courtesy State Library of NSW

assisted in the decision and eventually acceptable rates were negotiated. In June 1896, the Great Cobar Syndicate announced that Lithgow had been chosen as the site for the refinery.[2] Although this statement confirmed that the electrolytic process would eventually be utilised to recover the gold and silver, initially only a "fire" refinery utilising conventional reverberatory furnaces was to be commissioned.

A suitable 19-acre site was acquired from James Rutherford. This land had been part of the Eskbank Estate since 1880, being part of Portion 283, Parish of Lett, purchased from the Crown by Robert Pitt on 4 December 1866. It was level and appeared to meet all the requirements. It was close to the centre of Lithgow, there was proven coal below, Farmers Creek curved around the northern boundary and rail access was available by means of the siding serving William Sandford's Ironworks, which was now well established on the western boundary.

William Longworth, the driving force behind this initiative, transferred to Lithgow in June 1896 to supervise the establishment of the new works, bringing with him other key personnel.[3] Among these was Morgan Simon, who had come from Wales in 1874 to work at copper smelters at Currawang, Frogmore and at the Great Cobar. Appointed foreman smelter, Simon took up duties at Lithgow in October 1896 supervising the gang of men laying the railway sidings and constructing the thirteen reverberatory furnaces and the big chimney-stack.[4]

The furnaces were covered by an open-sided iron-roofed smelting shed and connected by underground ducts to a single brick chimney 135 feet high and 15 feet square at the base, which dominated the Lithgow industrial landscape. When built, this shed was 320 feet long, but it was soon extended by another 160 feet to house five more reverberatory furnaces and at the same time a small water-jacket blast furnace was also erected.

The Syndicate constructed a number of staff houses on the southern side of the works area and the new street which they faced was named Read Avenue (after Dr Richard Read, the Chairman of the Great Cobar Syndicate). As smelter foreman, Morgan Simon moved into one of these houses. Others were occupied by William Longworth (now "Managing Shareholder") and Harold Schroder, the Works Manager.[5]

William Longworth moved to Sydney in 1902 and his brother, Thomas, came to Lithgow as General Manager of the Great Cobar Syndicate's operations. A larger residence was erected for Thomas nearby. An office building was also constructed and Lithgow then became the headquarters of the Great Cobar Syndicate's operations. Thomas Longworth retired in 1905 and George Blakemore replaced him at Lithgow.

However, the sale of the Great Cobar assets by the Syndicate to the English company Great Cobar Limited in August 1906 was to bring changes to the role of Lithgow in the overall operations. When Herman Bellinger took over as General Manager in 1909, it was decided that he should live in Cobar.

Cobar Tunnel Colliery

The Lithgow coal seam underlay all of the Great Cobar property and, after some delay while the Syndicate

negotiated mining rights with Sandford, in 1898 Percy Goldsmith, the Syndicate's mining superintendent, advised that prospecting shafts were being sunk on the property. The following year Francis Kerr was confirmed as colliery manager and the Great Cobar Copperworks Colliery (generally shortened to "Cobar Colliery" or the "Cobar Tunnel Colliery") commenced production. The coal rights, comprising a total of 208 acres, extended due north of the surface property and underlay Portions 6 and 8, Parish of Marangaroo.

The seam was reached by a short drift located close to the furnaces This formed the intake airway and the main haulage road along which a steam engine raised sets of mine skips to the surface. This entry was 7 ft wide, sufficient only for a direct (single rope) haulage with the sets of skips returning underground by gravity. One accident report relates to a rake of 14 skips being involved. The haulage engine was set to one side of the skip road, the rope being diverted by a sheave wheel.

Underground, mining conditions were very good. Gradients were moderate and the competent stone roof required a minimum of timber. As the mine was non-gassy, a furnace at the foot of a 55ft deep shaft was sufficient to ventilate the workings. The mine was hand-worked by contract miners. Unlike other mines in the Lithgow coalfield, the full height of the seam was extracted using the bord and pillar system with the dirt from the several bands being thrown back and stowed in the working places. A benefit was that full-seam extraction allowed large horses to be employed.[6] The early workings were generally dry but as they extended northwards, water from Farmers Creek found its way into the roadways and a steam air-compressor was installed on the surface to supply underground pumps.

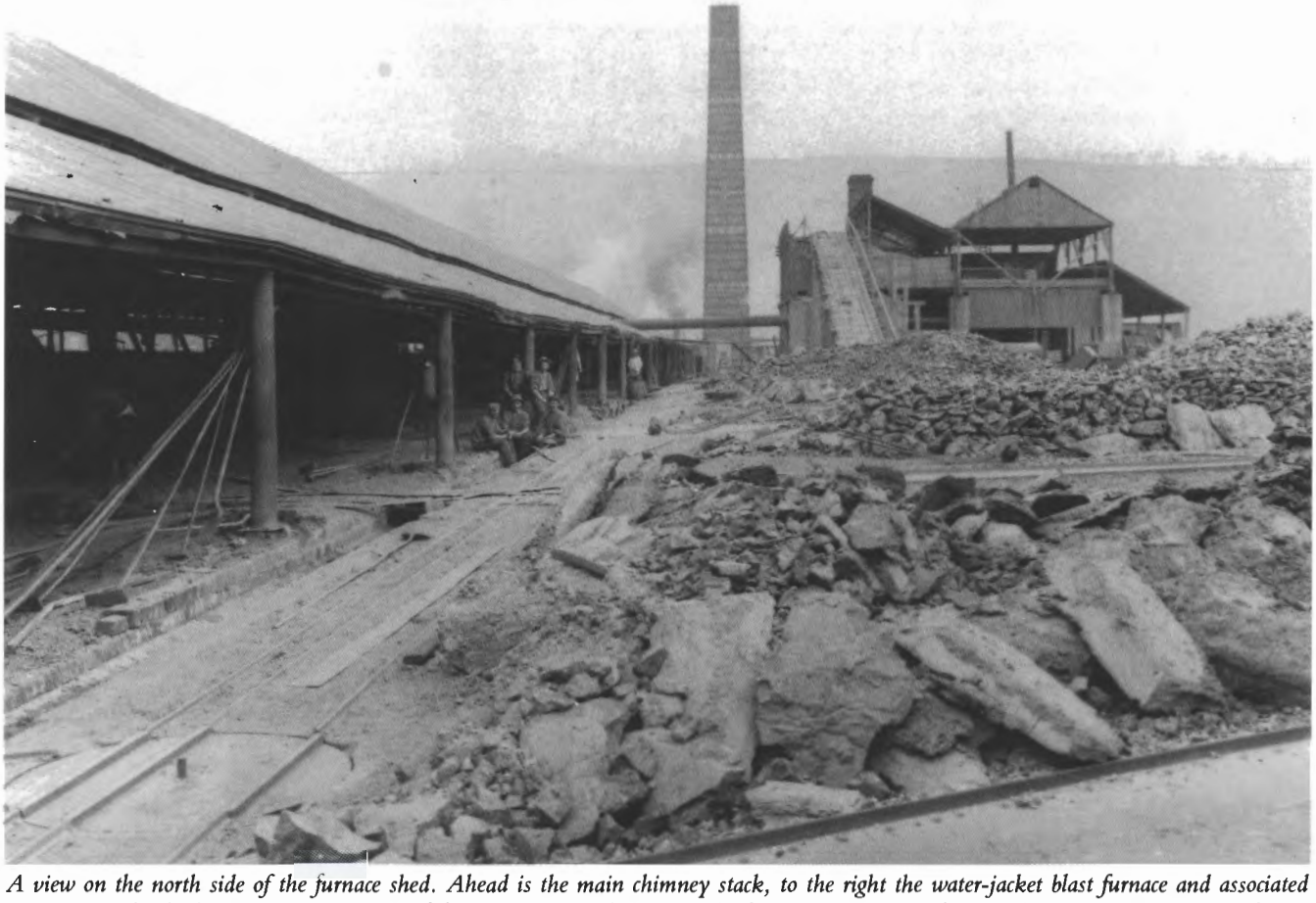
From the faces, horses delivered the miner's skips to flats along the main haulage road where they were hooked onto the surface rope. The skips used at Cobar Colliery were of a unique design, in that their wooden bodies could pivot on the frames and the load discharged through a top-hinged side door. On the surface, these skips were run right up to the furnace fireholes and their side tipping action allowed the coal to be placed beside the track.

In the early years the mine output all went as "run of mine" (unscreened coal) to the reverberatory furnaces. Some time later (probably around 1904) a second tunnel, 12 ft wide was driven in on the western side of the property allowing the installation of an endless rope haulage. On the surface, screens were erected so that the small coal could be the taken out for local use and the large ("best") coal sent to Cobar. In 1910, the plant at Lithgow was consuming some 1000 tons of small coal per week and a further 700 tons was railed to Cobar for the power station there.

Electrolytic process installed

Although the initial furnace installation was unable to commercially recover the gold and silver from the copper product, it had always been Longworth's stated intention that to this end, an electrolytic plant would be employed at Lithgow. Apparently some trials were made with the process in 1900, the *Lithgow Mercury* reporting in December that year that "electric light had been fitted up to the electrolytic plant and water jacket".

As a result of the crisis at Cobar and Nymagee caused by the 1902 drought, most of the Lithgow furnaces were laid idle for 15 months. During this slack period the main installation of the electrolytic process was proceeded with. In April 1903



A view on the north side of the furnace shed. Ahead is the main chimney stack, to the right the water-jacket blast furnace and associated machinery. The dual gauge siding and one of the turntables can be seen in the foreground. In mid-photo, a slag run (apparently paved with metal plates) leads from the furnaces to the dump. *Photo: NSW Government Printer; Courtesy State Library of NSW*

the water jacket furnace was relit to clean up slag and matte on hand.[7] By the end of 1903, the feed stock from the mines commenced to arrive again and the whole plant was again in operation with the electrolytic process gradually brought up to capacity. The copper from the reverbratory furnaces was now cast into anodes to go into the electrolytic tanks.

This new installation consisted of a Tank House containing some 150 wooden tanks ("cells") and a power station with four Elwell Parker horizontal steam engines, each driving a dynamo by means of a flat belt. Steam came from five hand-fired boilers. The Syndicate now employed some 220 men and boys at their refinery and 30 in and around their coalmine. It was around this time that we have a personal picture of life at the works...

Walter Longworth, a nephew of Thomas and William, came to Lithgow in 1903 to join his brother Henry who was working at the refinery.[8] Though he expected to be firstly given a labouring job, the manager, Mr Schroder, set him to work in the specialised Moebius parting process. Much of the information on the plant and processes in this article has been drawn from his reminiscences.

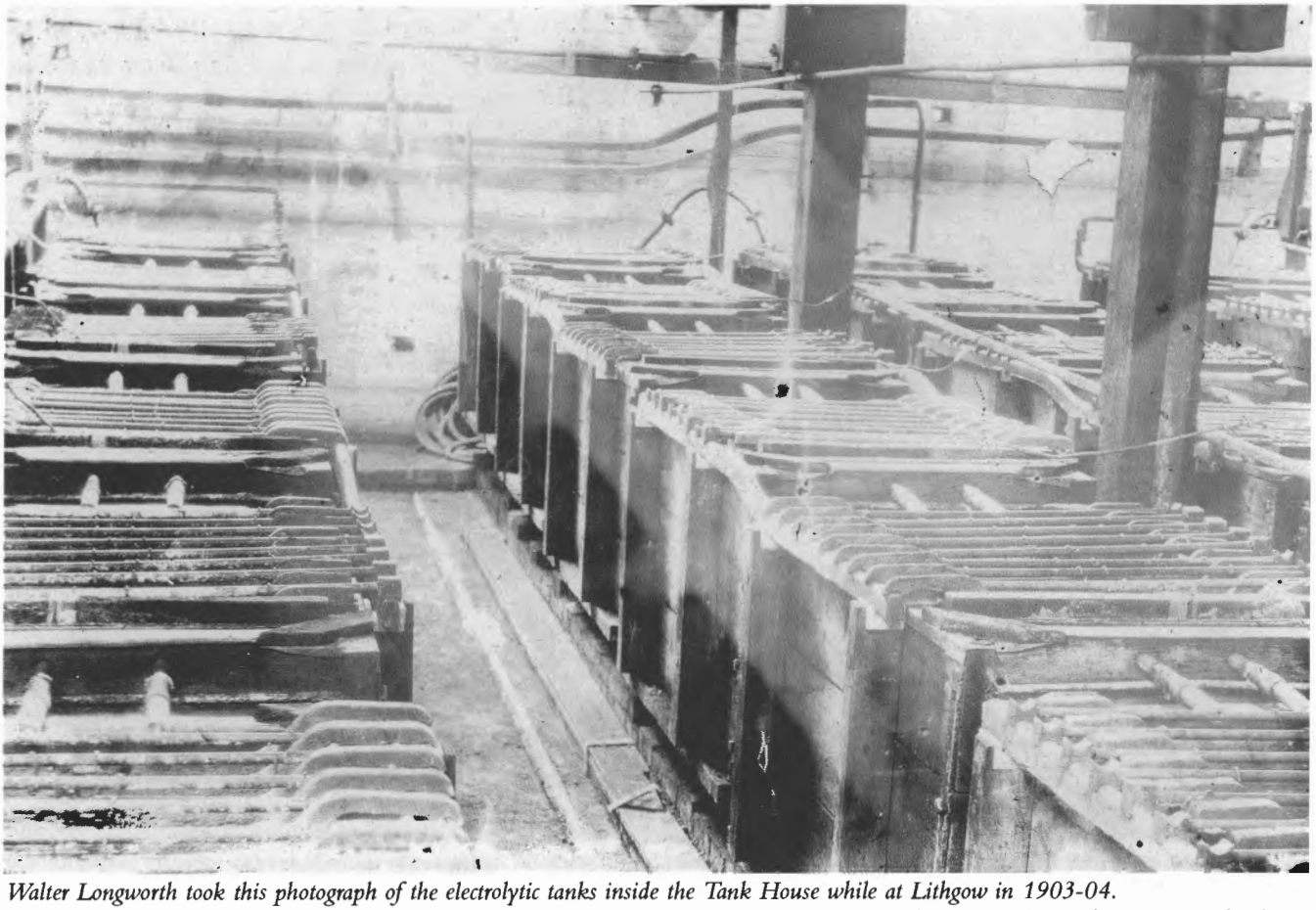
Harold Schroder was the metallurgist as well as works manager. He took a personal interest in young Walter and taught him all he could about the plant. A graduate from the South Australian School of Mines in Adelaide, Schroder also found time to teach chemistry and metallurgy at the Lithgow Technical College night classes. Walter was at Lithgow for 12 months, but with Mr Schroder's assistance he was able to cram two years of the 3-year metallurgy course. Understandably, he developed a deep respect for Schroder and went on to work with him at the Mount Morgan Ltd refinery and at the Electrolytic Refining and Smelting Company works at Port Kembla.

Great Cobar Limited

In August 1906, the Syndicate's interests at both Cobar and Lithgow were transferred to the new owners of the mine, Great Cobar Limited. General Manager Blakemore confirmed the new ownership arrangements to the NSW Mines Department and advised that John Evans was now the manager of Cobar Colliery.

At the beginning of 1908, Lithgow experienced a drought, which necessitated cutting off water supplies to all the industries in the town. This prevented the resumption of operations at the copper refinery following the Christmas break until the end of February.[9] By the end of 1908, in line with the new Company's plans, the ore output from the Bessemer converters at Cobar was despatched in the form of "blister" copper (99.4% pure) already cast in 2cwt (0.1 ton) anodes for the Lithgow electrolytic works.

As outlined in LR 159 (pp. 5-6), the huge new plant being erected by Great Cobar Limited at Cobar was experiencing major technical problems from September 1908. John Kendall came out from London to assess the situation. He attributed blame for the problems to the general manager, George Blakemore, who was dismissed and replaced by Herman Bellinger, a North American mining engineer, on 1 February 1909. Kendall had returned to England with bold expansion plans for the Lithgow refinery. On 3 June 1909, Bellinger advised that, although the plans still had to be ratified by the board in London, the intention was to construct four refinery furnaces in Lithgow "much larger than the present furnaces with a circular stack at least 200ft high", together with a new and larger blast furnace.[10] He expected it would take six months or more to construct the furnaces and the electrolytic plant would not be restarted until the new furnaces were operating.



Walter Longworth took this photograph of the electrolytic tanks inside the Tank House while at Lithgow in 1903-04.

Photo: Courtesy Lithgow Regional Library

However, Kendall returned to a frosty response from the board, which requested his resignation. Lithgow's hopes for an expansion of Great Cobar's copper refinery went with Kendall. Nevertheless, 350 more electrolytic cells had been added in the tank house during 1908 (requiring three more dynamos, together with three more engines and more boilers) and most of the reverberatory furnaces were progressively shut down. The expanded electrolytic plant was capable of treating about 130 tons of copper per week.[11]

Industrial Railways

The location of the Great Cobar copper refinery adjacent to the Eskbank Ironworks enabled the Syndicate to use the Ironworks branch railway line as a connection to the NSW Government Great Western Railway. This branch had been constructed in 1878-79. In 1896 twelve men were engaged laying railway track onto the Great Cobar property.[12]

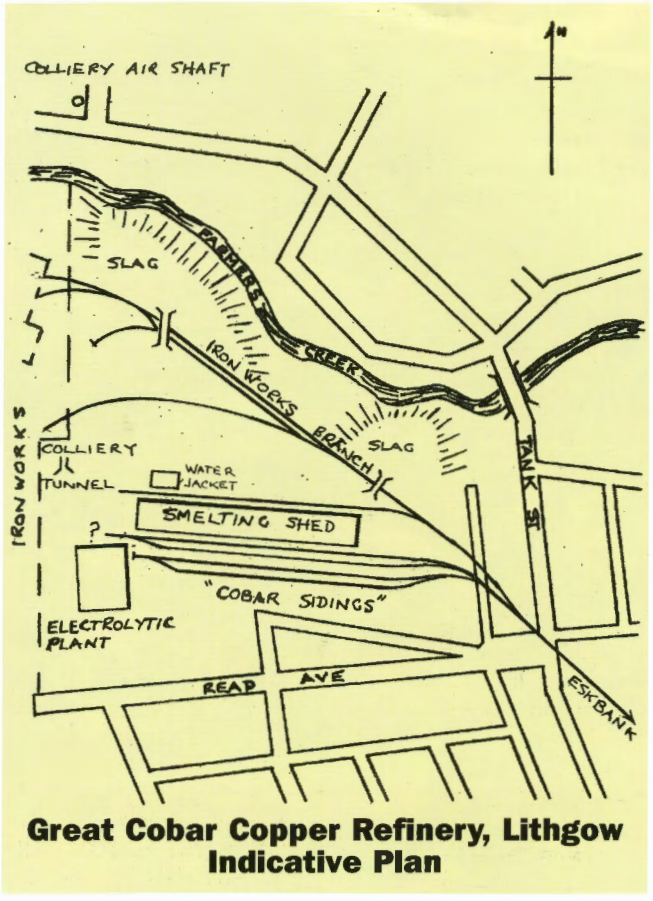
Examination of early NSW Government Railway plans indicate that initially, two sidings connected to the branch, one on either side of the smelting shed. On the northern side the dead end track was dual-gauged with small turntables arranged so that both main line trucks and mine skips could be run right in to the furnaces. Obviously locomotives could not venture onto this track, but, as the southern siding comprised a run-round loop, it appears that Government locomotives placed and collected their loads here.

The ironworks had a loop siding on their branch close to the Cobar points which for many years sufficed for their exchange traffic. Government locomotives were prohibited from passing this point due to the sharp curves and restricted clearances around the Ironworks. Shunting in this area was restricted by the proximity of the diagonal level crossing over the intersection of Read Avenue and Tank Street. The obstruction of these thoroughfares was the source of numerous complains from Lithgow Council on behalf or its irate residents. On many occasions the Cobar sidings would of necessity be used to place ironworks traffic.

The Eskbank Ironworks had owned two small tank locomotives but they had been dispensed with some time before the refinery opened and, for some years, horses worked all traffic beyond the exchange loop. In 1903, Sandford purchased a small 0-6-0 saddle tank locomotive second-hand from the NSW Government (Manning Wardle B/No 918 of 1884) which carried out shunting operations at the ironworks.

Inward traffic for the refinery consisted primarily of copper matte from the Cobar smelter, which arrived in Departmental four-wheeled trucks, while refined copper ingots were sent on to Sydney for shipment and boiler coal was despatched to Cobar. Interestingly, the material transported was referred to as "blister copper" when it was despatched from Cobar and as "matte copper" when it was booked in at Lithgow. Consignments were ticketed to "Great Cobar, Eskbank" and it is stated that those responsible for loading were charged with ensuring that the railway trucks were loaded to within 5 per cent of their marked capacity.[13] Other inwards traffic was coke (for the blast furnace) from Singleton and ore from outside mines for custom smelting. Usually around 600 tons of matte copper was kept on hand at Lithgow to ensure continuity of process.

Several narrow gauge rail lines were in use. From the mine tunnel the underground skipway (believed to be 2ft 2in gauge) ran to the reverberatory furnaces and (presumably) the power station boilers so coal could be tipped right at the fireholes. To move the copper (anodes and cathodes) to and from the



Great Cobar Copper Refinery, Lithgow
Indicative Plan

electrolytic tanks and furnaces there were 18-inch gauge tramlines. Inside the tank house, these tracks ran on the four sides of each of bank of tanks with small turntables on each corner. The lines were laid with 12lb/yd rail on wooden sleepers set in bitumen up the rail heads as some protection from the acidic electrolyte. A report in the *Lithgow Mercury* in July 1905 that a tramway had been extended alongside the furnaces to replace barrows for handling copper ingots may refer to these tracks.

In 1918 after the refinery had closed but with the colliery still in operation, G and C Hoskins came to an arrangement with the receivers of Great Cobar Ltd to lay another loop siding parallel with the Cobar tracks to expand their exchange siding capacity.

After Hoskins purchased the property in 1921, these four tracks acted as the principal exchange sidings for the new steelworks. Government locomotives placed traffic here, officially consigned to "Ironworks Exchange Sidings Lithgow" but in the verbal instructions given to shunters and locomotive crews the location was referred to as "Cobar".

The Refining Process

At Lithgow (as at Cobar) Great Cobar operated "custom smelters". This means that they were prepared to accept copper material from other mines for treatment. There are numerous references to copper matte (sometimes referred to as "regulus") from outside mines being received for refining.

Furnaces: In the early years at Lithgow there were 18 conventional reverberatory furnaces. They comprised rectangular brick "tunnels" similar to a baker's oven, fired at one end with the flue connection to the other. The material to be treated was placed through side doors onto a hearth midway along the tunnel and heated by the radiant heat "reverberated" or reflected from the curved firebrick roof, hence the name. The refining process involved repeated

This photo was taken not long after the 18in gauge light railway from the Tank House was extended beside the reverberatory furnaces. The hand-pushed trolleys are loaded with copper electrodes en route to and from the electrolytic tanks. Photo Walter Longworth; Courtesy Lithgow Regional Library

melting, slag removal, skimming and casting, each "heat" (in a specific furnace), driving off more impurities. Green timber or, in some cases, charcoal was often added as a reducing agent. In the last stage the copper ingots, cast in sand beds, were cooled and moved on for shipment or (after the electrolytic works opened) into the electrolytic tank house on the hand-worked tramline.

From 1896 until 1903, all treatment of the copper from Cobar was carried out in this type of furnace. After that time they continued in use to convert the feedstock into anodes for the electrolytic process. Then, as noted above, from 1908 onwards, with the commissioning of the Bessemer-type converters at Cobar, copper arrived at Lithgow already cast into 2cwt ingots ready for the electrolytic tanks and most of the reverberatory furnaces were rendered redundant. Four furnaces remained in regular use, two to recycle the scrap anodes and two to re-melt the cathodes for casting into ingots. Others, no doubt, were retained for "custom" processing.

Slag from the reverbratories which assayed as containing residual copper was retreated in the water jacket furnace, and the remainder dumped. The first dump was close beside the furnaces between the smelting shed and the Ironworks railway. As this area filled up, a slag gantry raised the height of the dumps so that the busy Ironworks Siding ran in a deep cutting, crossed by several bridges. These enabled slag to fill the area right down to Farmers Creek. In later years, a railway line was run into this area so that the slag could be reclaimed and shipped to the Sulphide Corporation works at Cockle Creek for retreatment.

Electrolytic Process: The "heart" of the electrolytic process was the Tank House, in which the 500 lead-lined wooden tanks ("cells"), were connected by a system of pipes and open launders. These cells were arranged so that an electrolytic solution (comprising copper sulphate and sulphuric acid) flowed by gravity down each row then into a launder from which it was recirculated by compressed air. Other air jets agitated the individual cells while steam coils maintained the correct temperature.[14] All the pipes and launders were made of lead. The anodes were hung in the tanks from copper busbars and a (low voltage/high-amperage) direct current was applied between them and an equal number of thin copper "cathode" sheets. The action of the current flow was to transfer pure copper from the anodes to the cathodes. In around three weeks the anodes had been reduced to around 8 per cent of their original mass and the cathodes increased to such a size that they began to short-circuit the electric current.

Working on each tank in turn, the depleted anodes and "grown" cathodes were lifted from the electrolyte, then washed down (to recover the valuable "mud") and melted in separate reverberatory furnaces. The anodes were recast and sent back to the feedstock, whilst the cathode copper was run off into ingots branded "ELC Australia", assaying at 99.98 per cent pure electrolytic copper, the end product of the long production chain.

The gold and silver sludge, the recovery of which justified the whole electrolytic process (but now known prosaically as "mud") lay as sediment on the bottom of the tanks. Periodically a small group of cells was bridged out of the electrical circuit and emptied. The mud was collected, washed and melted in a small furnace into an alloy known as "Dore Bullion". It was then specially treated in the Moebius plant (a small electrolytic cell using silver nitrate as an electrolyte). Bars of gold (220 oz troy) and silver (500 oz troy) bullion were produced for delivery to the bank.

Demise

Financial difficulties arising from the massive expenditure in new plant at Cobar in the 1908-1910 period (LR 159) meant that Great Cobar Limited was seeking to save costs. The Company's head office was transferred to Cobar in 1910 and operations at the Lithgow refinery were cut back. By the beginning of 1911, there were only 70 to 80 men employed at the works and colliery.[15] Rumours that the plant was to close soon surfaced in Lithgow. By May 1911 the company was blaming the NSW Railways for its difficulties. The company argued that, railway freight charges were so arranged that every ton of copper regulus sent to Lithgow for refining penalised the company, as it would be cheaper to send the copper direct to Sydney and then export it to America or Germany than to have it treated in Lithgow.[16]

The State Government responded by granting further concessional freights to the Great Cobar company and it was expected that activity at the Lithgow works would be extended as a result.[17] However, this was not to be and word was received in Lithgow in early August 1911 that the refinery was to be closed immediately, presumably on the recommendation of Herman Bellinger.[18] Henceforth, blister copper was sent to the more modern works of Electrolytic Refining and Smelting Company at Port Kembla for final treatment or, in some cases, sold unrefined for export.

Finale

When the refinery closed, the coal mine continued under Great Cobar ownership retaining the average manning of 25 men and boys underground and seven on the surface. Coal was sent to Cobar and also sold on the open market. After the Great Cobar Ltd went into receivership, the receivers continued to operate the coal mine until April 1921 when it was sold to G&C Hoskins and became known as Smelting Works Colliery. It was worked in conjunction with Hoskins' Ironworks Colliery and the workings were connected underground.

The wisdom of such a connection must have been questioned in February 1928 when water from a flash flood in Farmers Creek broke through into the Smelting Works headings. Despite efforts to erect a coffer-dam, the entire mine was soon flooded. Water also ran into the interconnected workings of Ironworks, Zig Zag and Hermitage Collieries. Being Sunday no one was at work in any of these mines. However one hapless resident was leaning on his own back fence when it gave way and he fell into the torrent. Some weeks later, his body was recovered from deep in the workings by a mines rescue team. Electric pumps were installed underground so that Smelting Works tunnel resumed production in March 1928, though it took a further two months before the Ironworks miners were back at work.[19]

The Lithgow refinery was to have a final association with the Cobar copper field. The former Great Cobar general manager, George Blakemore, had become managing director of the CSA Mine at Cobar and, in August 1918, he announced that his company would erect an electrolytic copper refinery at Kandos to enable copper matte and copper ore to be treated and to recover the gold and silver.[20] It was a central element of an ambitious plan by Blakemore to make the CSA Company the major copper producer in New South Wales. In December 1918, Blakemore announced that the CSA Company had purchased a complete outfit of the depositing tanks for the refinery that he originally designed for the Great Cobar Syndicate's electrolytic refinery at Lithgow.[21] However, before the Kandos plant could be commissioned, a disastrous fire at the CSA mine burnt out Blakemore's ambition. Further assessment of the CSA mine will be covered in a future article in this series.

Hoskins Iron & Steel acquired the land on which the derelict smelters stood. In 1922, the buildings were demolished and the chimney-stack felled so that the area (still known locally as "The Cobar Paddock") could be utilised for new surface works associated with the now integrated iron and steel works. A Hoskins locomotive was used to demolish the stack. After initial difficulties, the call of: "*Stand back, there she goes*" was heard, as a dominant Lithgow landmark came down in a cloud of dust.[22] The bricks from the stack were then used in the bridge abutments on the railway leading to the new steelworks.

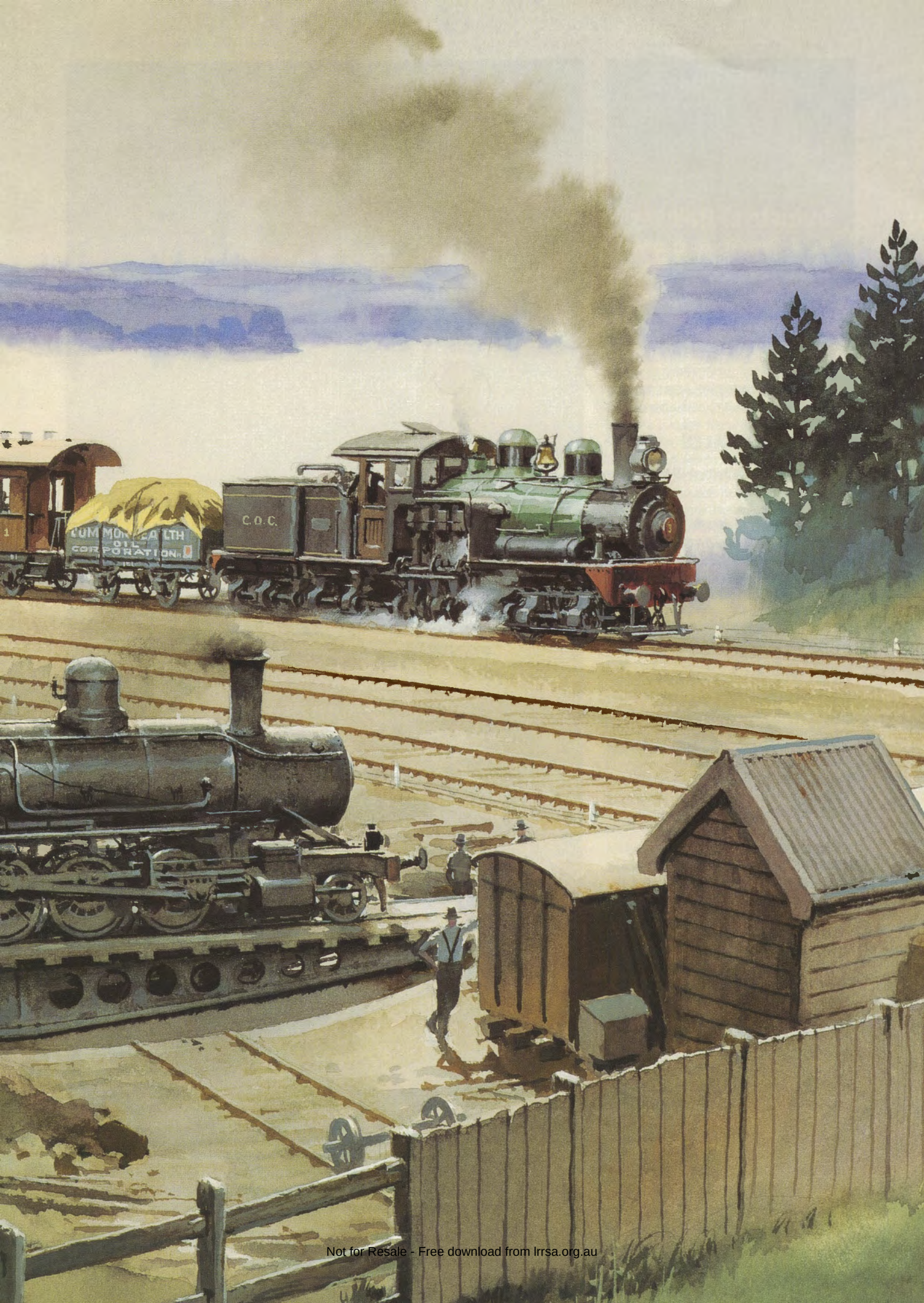
After the Hoskins moved their iron and steel making to Port Kembla, the Cobar tunnel, still known as Smelting Works Colliery was acquired by the Genders family (later Genders Mining Ltd) and worked on a small scale. All coal was now moved from the minesite by road as the original rail sidings were long gone but small diesel locomotives were for a time used underground.

The end came in June 1964, when Farmers Creek, again in flood, burst through into the workings. As in 1928, there was no one underground, but this time the mine was nearly depleted and the owners advised the Mines Department that they had creased mining activity on the property.[23]

References

1 *Lithgow Mercury*, 22 May, 1911, p.4, The Great Cobar Trouble
2 *Town & Country Journal*, 6 June 1896
3 *Town & Country Journal*, 13 June 1896
4 *Lithgow Mercury*, 2 August 1922, Obituary Morgan Simon
5 *Lithgow Mercury*, 2 August 1922, Obituary Morgan Simon
6 Danviers Powers, *Collieries and Coalfields of Australia*, 1912
7 *Cobar Leader*, 17 April 1903. Copper Mine
8 As above
9 *Lithgow Mercury*, 31 January 1908, p.4, Local Industries
10 *Lithgow Mercury*, 4 June 1909, The Great Cobar Works
11 *Sydney Morning Herald*,. 27 April 1908.
12 *Annual Report on Railways*. 1879.
13 Blakemore G.H. *Tariff for Purchase of Ore*. 1 January 1907. In. Carn.e J.E. 1908. *Geological Survey - Mineral Resources No. 6 - The Copper Mining industry*. Government Printer.
14 This description from Carne J.E. 1908, *Geological Survey - Mineral Resources No. 6 - The Copper Mining industry*. Government Printer.
15 *Lithgow Mercury*, 16 January 1911, p.2, The Copper Smelting Works
16 *Lithgow Mercury*, 26 April 1911, p.4, The Great Cobar Copper Works; and 22 May, p.4, The Great Cobar Trouble
17 *Lithgow Mercury*, 28 July 1911, p.4, Local Industries
18 *Lithgow Mercury*, 4 August 1911, p.4, Great Cobar Refineries
19 Mines Department, *Annual Report* 1928
20 *The Western Age*, 30 August 1918
21 *The Western Age*, 24 December 1918, CSA Chairman's Report (continued)
22 *Lithgow Mercury*. 7 August 1922.
23 Mines Department, *Annual Report* 1962.

Centre pages: *At Katoomba, in the Blue Mountains, west of Sydney, the crew of a NSW Government Railways 'J' class 2-8-0 pause to watch Wolgan Valley Railway class 'C' Shay No.3 (Lima 2100 of 1908) pass through on its delivery run to Newnes, on the morning of 11 January 1909. The slow moving loco and its short train, which left Auburn at 6am, will part company with the government system at Newnes Junction, a further 22 miles towards Lithgow. Much of the history of the Wolgan Valley line and the shale works that it served remains shrouded in mystery and mired in controversy, and this incident is no exception, with some historians maintaining that it never took place. If it did, however, one can imagine what a sight and sound it must have made on that Monday morning 93 years ago. Painting by Phil Belbin*



Industrial Railway NEWS

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NEW SOUTH WALES

ALLIED COAL PTY LTD, Bellambi West Colliery
(see LRN 55 p.3)
1067mm gauge
The closure of this mine, which uses the old South Bulli portal, was announced on 29 January, with a loss of 190 jobs. It is thought that diesel personnel carriers and battery electric locomotives were used here.
Brad Peadon 2/02; Chris Walters 2/02; Chris Stratton 2/02 (all Locoshed internet discussion group); www.illawarramercury.com

BHP BILLITON PLC, Appin Colliery
(see LR 142 p.21)
1067mm gauge
BHP 4wBE locomotive 55 (built Newcastle about 1948) was noted shunting a train at the drift entrance on 20 January 2002.
Chris Walters 2/02

BHP BILLITON PLC, Tower Colliery
(see LRN 75 p.3)
1067mm gauge
This colliery is to be closed by the end of 2002, because of mining problems and geological difficulties, according to an announcement made on 15 February. Development work underground will cease from April. Tower Colliery currently produces about 1.4 million tonnes per annum of metallurgical coal, mostly for the Port Kembla Steelworks. Production work will continue at Longwall 20 with a reduced workforce of 75 until the completion of coal extraction in December 2002. At this stage, gas drainage will cease, longwall equipment will be stood down and ventilation roadways transferred to Appin Colliery.
Attention is being given to the expansion of the West Cliff and Appin mines in the No.1 Seam deposit. In addition the Dendrobium mine, currently under development, is scheduled to commence commissioning in 2005. No.3 Seam operations will continue at Eloura Colliery until reserves are depleted in late 2004.
Brad Peadon 2/02

Top: *With the Illawarra escarpment in the background, BHP's ex Goldsworthy Mining GEC (Australia) Co-Co DE D49 (A.243 of 1972) heads a coal train towards the Port Kembla steelworks, 20 December 2001.* ***Above:*** *BHP's English Electric (Australia) Co-Co DE D34 (A.197 of 1969) on a limestone shunt at Cringila, 20 December 2001. Photos: Brad Peadon*

Top: *BHP Coal's Vernier Engineering 4wDHR AIS120 (built 1981) at the Nebo Portal of Elouera Colliery on 20 December 2001, the day before closure of this access point. Photo: Brad Peadon*
Centre: *Isis Mill's Walkers B-B DH* ISIS No.3 *(600 of 1968, rebuilt 1994) eases its rake along at the top of Cordalba Hill as it approaches the mill, 8 September 2001. Photo: John Browning*
Above: *When locomotive breakdowns at Macknade Mill require a locomotive to be sent over on loan from Victoria Mill, the most likely candidate is EM Baldwin 0-6-0DH* HOBART *(4413-1-7-72 of 1972). Here it is outside the Macknade loco shed on 25 October 2001. Photo: Chris Hart*

Industrial Railway NEWS

BHP BILLITON PLC, Port Kembla

(see LR 163 p.18)
1435mm gauge
All three active English Electric "K class" Co-Co DE locomotives D47 (A.146 of 1967), D49 (CEC A.243 of 1972) & D51 (A.111 of 1965) have continued to see use on coal trains during January and February because of problems with the leased 81 class locomotives. D47 has had both turbochargers replaced and two new canopy sections fitted. D51 hit something on the Kemira line on 4 February and bent the steps and handrails. Clyde Co-Co DE locomotives leased from NRC, 8106, 8108 and 8115 (82-1025, 82-1027 and 82-1034, all of 1982) were also noted on coal trains in January and February. It seems that 8102 (82-1021 of 1982) was sent to Port Augusta around the end of January for alternator repairs.
English Electric Co-Co DE D34 (A.197 of 1969) has a failed traction motor blower. There is a problem with spares for this locomotive as it was a unique design. It will be returned to service as it has a greater tractive effort than the Ks due to its more modern electronic load regulator.
United Goninan commenced the five-year locomotive and rolling stock maintenance contract on 20 December. A work force of 30 has been mooted, although figures of as low as 11 have been quoted in practice. As many as 80 were employed in this area at one time.
Plans for the Dendrobium Mine show that coal trains bound for Port Kembla will be loaded in a tunnel under the coal stockpile.
Chris Stratton 1/02; 2/02 (Locoshed internet discussion group)

THE MANILDRA GROUP

(see LR 144 p.19)
1435mm gauge
Towards the end of January, Clyde Co-Co DE MM02 (64-342 of 1964) from Manildra's Gunnedah plant was at Lithgow for servicing and needed returning home. This was done by attaching it to the train passing through Lithgow for the Manildra plant at Nowra. On arrival at Nowra, the locomotive left attached in a train for Gunnedah on 29 January. This method involves lengthy travel but it must be cheaper than the other possibilities.
Brad Peadon 1/02

NEW ENGLAND ANTINOMY MINES NL, Hillgrove

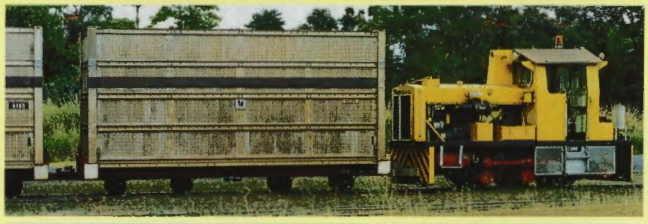
(see LR 148 p.17)
610mm gauge
This company was placed in liquidation in January. A number of battery electric locomotives and other items of rail equipment were in use on ore haulage at various levels in the mine and will probably be disposed of.
John Shoebridge 1/02; Brad Peadon 1/02 (both Locoshed internet discussion group)

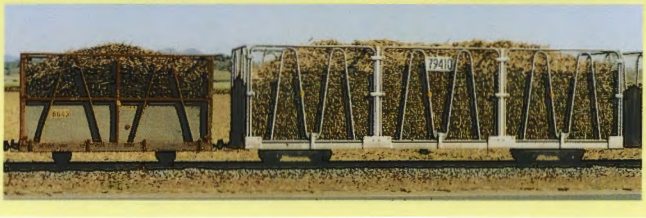
CANE RAILWAY BINS

Photos by Brian Webber; notes by John Browning

Bulk cane bins began to replace the whole stick cane truck with the introduction of chopper harvesting from 1956. Designs were based on a four-wheeled cane truck chassis, at first with a corrugated iron box on it, then the familiar bin of pipe-and-mesh construction. Early types were of 2- and 3-tonne capacity, but a 4-tonne bin became common and the cane truck had largely disappeared by the end of the 1960s. Four-wheeled bins of up to 6-tonne capacity were designed to be taken into the field on roll-on roll-off trailers. The modern move to infield rubber-tyred tipper elevators means that bin sizes can be much larger, and large bins of both four-wheeled and bogie design have been introduced.

Brian Webber recorded a variety of types during the 2000 season.





Clockwise from above: *Older bins have sometimes been fitted with vertical extensions to increase capacity and also to match the profile of larger bins so that they fit the tippler at the mill. Tully Mill's Walkers B-B DH* TULLY No.4 *(622 of 1969, rebuilt 1996) heads a rake of superannuated 4-tonne bins besides a banana plantation.* ❑ *Robust 4-tonne bins of this type were still being built until recently for Mackay Sugar. Farleigh Mill's EM Baldwin B-B DH* HAMPDEN *(6706-1-5-76 of 1976) shunts among the many sidings at the mill's northern terminus of Wagoora. The healthy capacity achieved with tipper elevator loading is demonstrated. Note the link and pin coupler.* ❑ *A variety of 6-tonne bins were introduced from the 1970s. This particular design was first introduced to the Bundaberg Sugar mills at Bingera. Millaquin's Clyde 0-6-0DH 561 (57-159 of 1957) eases a rake of 6-tonners out of the empty yard and towards the distillery.* ❑ *This 10-tonne four-wheel bin design was introduced at Proserpine Mill in 1994, and will be the only type in use in the 2002 season. Similar bins are in use at Tully and Mulgrave Mills. The locomotive is EM Baldwin B-B DH 10 (9816-1-10-81 of 1981).* ❑ *Mossman Mill's Com-Eng 0-6-0DH locos* DOUGLAS *(AL2562 of 1963) and* FAUGH-A-BALAUGH *(AL4190 of 1965) haul some empty 9-tonne "canetainers" at Mossman Mill. These bulk containers were introduced at Mossman Mill in 1968 for road transport. They were first placed on bogie rail vehicles in 1971 and had displaced 4-wheel bins by 1980, remaining for many years the sole type of bogie bin in the industry.* ❑ *These 14-tonne containers were introduced at South Johnstone Mill in 1995. They are used to bring cane by road transport from the Atherton Tableland. On arrival, they are placed on bogie flats at a transfer station in the mill yard to be shunted a few hundred metres to the tippler. Com-Eng 0-6-0DH 19 (AH4688 of 1965) is dwarfed as it shunts empty bins .* ❑ *The impressive size of Pleystowe Mill's new 15-tonne bogie bin compared to the 6-tonne four-wheeler can be seen in this shot. A 14-tonne bogie prototype design was introduced for the 1999 season, and the larger modification followed in 2000. CSR has also introduced an 11-tonne bogie bin at its Victoria Mill.*

Top: *Manildra's standard gauge Clyde Co-Co DE MM02 (64-342 of 1964) ventures out to do some shunting at Gunnedah, 28 September 1998. Photo: Ray Graf* ***Centre:*** *Isis Mill's 28-tonne EM Baldwin B-B DH 11 (10130-1-6-82 of 1982) heads through the township of Childers with a rake of cane from the Horton area, 8 September 2001. Photo: John Browning* ***Above:*** *Millaquin Mill's 22-tonne EM Baldwin* CALAVOS *(4983-1-7-73 of 1973) heads a rake from the Alloway area towards the mill, 8 September 2001. The second bogie Baldwin locomotive built, it was delivered to Bingera Mill, where it was* GIVELDA, *and was later 73 at Fairymead before coming to Millaquin in 1990. Photo: John Browning*

Industrial Railway NEWS

BLUE CIRCLE SOUTHERN PTY LTD, Medway
(see LR 152 p.18)
1435mm gauge
Goninan Bo-Bo DE D1 (023 of 1967) has been acquired for preservation at the Goulburn Rail Heritage Centre and was transported there by rail on 9 February.
Brad Peadon 2/02

QUEENSLAND

BUNDABERG SUGAR LTD, Millaquin Mill
(see LR 163 p.19)
610mm gauge
Bundaberg Foundry 0-6-2T 1 (1 of 1952), displayed in the Distillery area at Millaquin since 1987, has been donated to the Bundaberg Steam Tramway Preservation Society and was transported to the North Bundaberg Botanic Gardens early in February.
Bingera Mill's EM Baldwin 0-6-0DH *ST KILDA* (6-2179-1-6-67 of 1967) was noted at Millaquin on 15 February. It has been used to haul the poison train over the Millaquin network this slack season. Fairymead Mill's EM Baldwin 0-6-0DH *PERRY* (6-1576-1-8-66 of 1966) has been used to haul ballast trains on the mill's system this slack.
Bingera Mill's Walkers B-B DH *KOLAN* (633 of 1969, rebuilt Bundaberg Foundry 1966) may not receive the forecast new engine this slack season, due to budgetary constraints.
ABC Local News 4/2/02; Matthew Smith 2/02 (qrig internet discussion group); Lincoln Driver 2/02

BUNDABERG SUGAR LTD, Moreton Mill
(see LR 162 p.19)
610mm gauge
Concern is mounting for the future of the mill, in spite of the fact that the 2002 season's crushing will go ahead using the tramway system for cane transport. A significant increase in cane production and a move to road transport appear to be two major requirements of the miller. Pressure has been exerted on the local community and council that the acceptance of heavy road transport for all cane transport is the price to be paid for the continuance of the sugar industry in the district. The local independent member of State parliament says the mill's Belgian owners are holding the Maroochy Shire Council to ransom with their plan. A meeting with the owners is planned for April.
It has been suggested that in any case, the delivery of cane will be not directly to a loading station at the mill, as was previously implied, but in cane bins hauled piggy back to Howard Street yard, with rail haulage to the mill through the centre of Nambour to continue.
Nambour & District Chronicle 16/1/02 & 6/2/02 via Ron Aubrey; Ron Aubrey 2/02; Steve Malone 2/02; Barry Blair 2/02 (Locoshed internet discussion group)

Industrial Railway NEWS

CENTENNIAL COAL CO - GLENCORE - TOKYO BOEKI JOINT VENTURE, Cook Colliery, South Blackwater
(see LR 154 p.19)
1067mm gauge
Fox 4wDHR 1 (323 of 1972), out of use in recent years, has been disposed of and is now displayed in a park besides the Capricorn Highway in Blackwater.
Editor 2/02

CSR LTD
(see LR 162 p.18)
610 & 1067mm gauge
A dispute over cane locomotive crewing levels at CSR's seven Queensland mills was to go before the Industrial Relations Commission during March. The Australian Workers Union is claiming that a proposed move to driver only operation would create safety problems. A prime candidate for this type of operation would be the raw sugar runs at Macknade and Victoria Mills, where other personnel may be available at each terminus. It is argued that in locations where "block trains" operate, such as on a number of longer runs at all mills, the only role for the "fireman" is as an additional lookout once the train has left its starting point. On shorter runs, the possibilities of hand-held remote control devices seem likely to be taken up to enable driver only operation.
The sale of CSR's sugar division has been postponed and seems unlikely until the 2002-3 financial year in order to maximise shareholder returns. A trade sale rather than a stockmarket float currently seems the most likely outcome.
ABC Local Radio Mackay 28/02/02 via Barry Blair; Steven Allan 2/02 (both Locoshed internet discussion group); *Herbert River Express* 24/11/01 via Chris Hart

CSR LTD, Herbert River Mills
(see LR 163 p.20)
610mm gauge
Increasing tonnages of cane being hauled over Sheahans Road, Lannercost have led to a proposal to build a Victoria Mill tramline extension along road reserves in the next three years. This in turn has led to protests from local residents who want to reroute the proposed line away from their properties, a solution that has been rejected as unacceptably expensive. At Victoria Mill, it appears unlikely that Walkers B-B DH *CLEM H McCOMISKIE* (605 of 1969 rebuilt 1991) will receive the forecast new cab this slack season. EM Baldwin 0-4-0DH *ALBANY* (6-1792-1-11-66 of 1966) is used intermittently as shed/workshop shunter at Victoria and sees little if any further use.
At Macknade Mill, Clyde 0-6-0DH 18 (DHI.5 of 1955) is being fitted with roller bearing coupling rods for the forthcoming season, while Clyde 0-6-0DH 16 (DHI.1 of 1954) is receiving new aluminium engine compartment doors, in the same style as the original. Macknade's Clyde 0-6-0DH 11 (65-383 of 1965) went to Victoria Mill for use by the navvies on 12 February. EM Baldwin 0-4-0DH 17 (6-446-1-9-65 of 1965) went over to Victoria for poison spraying duties the next day.
A total of 30 newly assembled bogie bins built by Rinaudo Engineering have been hauled to Macknade Mill from the Wharf Line during January and February. Ten of the new bins have been assembled with galvanised frames as a trial to try to reduce corrosion problems. The galvanised frames are grey in colour while the normal ones are red oxide.
The mills' Plasser spot tamping machine (434 of 1997) went on loan to Plane Creek Mill in the second week of January and had returned by the end of February.
Herbert River Express 13/10/02 via Chris Hart; Chris Hart 1/02 & 2/02

CSR LTD, Kalamia Mill
HAUGHTON SUGAR CO PTY LTD, Invicta Mill
PIONEER SUGAR MILLS PTY LTD, Pioneer Mill
(see LR 156 p.21, 162 p.22 & 163 p.20)
610mm & 1067mm gauge
An 11km dual gauging project is reportedly underway to extend the 2ft gauge Kalamia mill tramline network further along existing Pioneer Mill 3ft 6ins gauge track. It seems likely that this work extends south from Airville along Clare Road past The Rocks to link up with the eastern extremity of the dual gauge Pioneer Mill / Invicta Mill line. This work completes a 23.5km dual gauge connection shared between Pioneer Mill and the two mills that use 2ft gauge tramways.
It is confirmed that Pioneer Mill's Clyde 0-6-0DH *McDESME* (DHI.3 of 1954) has been disposed of to the Mackay Heritage Railway group. It is believed that it left the mill around the end of January.
Robert James 2/02; Peter Ford 2/02

MACKAY SUGAR CO-OPERARTIVE ASSOCIATION LTD
(see LR 162 p.30)
610mm gauge
It is reported that Hunslet 0-4-2T 1042 of 1910 has been removed from storage in the crane shed at Pleystowe Mill to a building the North Eton mill site.
John Browning 1/02

TASMANIA

TASRAIL SERVICES PTY LTD, Emu Bay Railway
(see LR 163 p.21)
1067mm gauge
The seven ex-Emu Bay Railway 1100 class Walkers B-B DH locomotives are expected to be made redundant around April because the concentrate wagons made surplus to requirements with the closure of the Hellyer mine are being converted to air braking. This will enable Tasrail diesel-electric locomotives to handle the trains of concentrate from the Rosebery and Mt Lyell mines. The EBR has previously been equipped with vacuum brake equipped locomotives and rolling stock. The old type of transmission fitted to the diesel-hydraulics means that they are unlikely to see further use in sugar mill service.
A concentrate train derailed at Primrose Station, Rosebery, on 16 January. It was hauled by 1105, 1106, 1104 and 1101 (642 of 1970, 658 of 1971, and 641 & 638 of 1970 respectively) with eighteen X wagons loaded with Copper Mines of Tasmania copper concentrates bound for the Burnie wharf. The rear bogie of the third wagon split the points and 1101 and a total of five wagons were derailed as considerable track damage took place.
Shane Polle 1/02; Robert Bushby 1/02 (both Locoshed internet discussion group); Robert James 2/02

VICTORIA

BHP BILLITON PLC, Long Island, Hastings
(see LR 151 p.22)
1600mm gauge
Ex-VR Clyde Bo-Bo DE Y 148 (65-414 of 1965) was painted bright yellow between mid December and 26 January when it was observed shunting in the exchange sidings.
Ross McClelland 1/02 (Locoshed internet discussion group)

ENERGY BRIX AUSTRALIA CORPORATION PTY LTD, Yallourn
(see LR 161 p.22
900mm gauge
It is reported that an auction was held at the Yallourn loco depot site in November 2001 by National Auctioneers & Valuers. It appears that the five Gemco 4wDH locomotives numbers 1 to 5 (66D50084/241/86, 66D50086/242/86, 66D50083/243/86 & 66D50085/244/86 of 1986 and 66D50087/245/87 of 1987) were disposed of, possibly for scrap, although it seems that two were still on site in February. Any further details would be welcomed. Sources in the sugar industry indicate that the prices asked for the two Walkers B-B DH locomotives, CC01 and CC02 (586 & 587 of 1968) were higher than the market could bear given the present depressed state of the industry, and it is not known if they were also offered for auction.
Rob Ashworth via John Cleverdon 2/02 (Locoshed internet discussion group); Editor

WESTERN AUSTRALIA

BHP IRON ORE
(see LR 163 p.21)
1435mm gauge
A fault affecting the independent brakes of the new General Electric AC6000 Co-Co DE locomotives led to them being banned from leading trains from 12 January. As individual units received attention to repair the fault was repaired, the AC6000s gradually began to resume their favoured leading positions.
Richard Montgomery 1/02 (Locoshed internet discussion group)

Book Review

Victorian Railways Narrow Gauge "G" Class "Garratts in the Otways" Part Three

Edited by Emile D. Badawy

48 pages, 297 mm x 210 mm, 52 photographs. Published by Train Hobby Publications.

This follows the same style as its predecessors (reviewed in LR 140 and LR 147), a landscape format with all photographs reproduced in colour, mostly one photograph to the page, and with excellent printing quality.

My initial reaction was lukewarm. It certainly seems to lack the impact of the first book. Nor, I feel do the photographs have the same pictorial quality as the first in terms of scenery and composition. Nevertheless, there are some very interesting photographs, many of G41 on goods trains in the 1954-57 period. At that time the photographers would have had to contend with difficult colour film, and many of the pictures are taken in partially overcast conditions.

The view of Weeaproinah on page 8 is very effective, the huge dead tree trunk giving an idea of the timber the railway took away; whilst the photo on page 26 taken from a special passenger train brings back great memories of riding on the line.

The book includes two views of rail recovery trains at Lavers Hill, and another just beyond Weeaproinah.

Frank Stamford

Video Review

Veterans of the Vivarais

Steam and vintage railmotors on France's most successful preserved railway

53 minutes. VHS PAL (NTSC also available). Available from the publishers: Railstuff, P.O. Box 2155, GRACEVILLE EAST Qld 4075. Price $39.75 including postage within Australia. Major credit cards accepted.

The metre gauge Vivarais railway runs along the Doux River valley, from Tournon to Lamastre, in the Rhone region of southern France, a distance of about 33 km. It was once part of a much bigger system, but when that was closed in 1968, this section was retained as a preserved railway. It dates from 1891.

For part of the route the railway passes through a rugged gorge, then the scenery changes to more open, but still quite hilly, farm land. The line takes a winding route, and includes many stone viaducts. The trains are hauled by impressive looking 0-6-6-0 Mallet Tank locos, with shrieking high-pitched whistles. The railway also has three other very interesting steam locos, which are seen in the video, but not in action. The video follows several trains over the full length of the line, and includes a variety of interesting shots, both close up and distant. I found the switching from views of one train to another and back again a little distracting, however that is a minor problem.

The quality of the image is good, the scenes very impressive, and the sound quality generally good. I think my favourite scene is the field full of very privileged free-range chooks who have a grandstand view of the railway, and show their appreciation with excellent chook noises!

There are also a number of scenes of a 1937 Billard rail-motor, which makes strange rumbling and burbling noises.

This is clearly a railway worth visiting, but since that's not easy from Australia the video makes an excellent substitute.

Frank Stamford

SOCIETY ACTIVITIES

South East Queensland Group - Forthcoming Tours

Palmwoods: Saturday 27th April 2002

Members and visitors are invited to join our informal tour to Palmwoods on Saturday 27th April 2002. It is hoped that we will be able to inspect the recently rediscovered remains of the Buderim Shay boiler at Palmwoods, as well as the tramway formation itself. Contact: Bob Dow telephone (H) 3375 1475 (W) 3864 1828 Email: dowmont@gil.com.au.

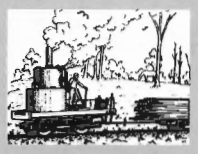
Field Excursion No.5, to the Canungra Railway and Tramway: Saturday 25 May 2002

The SE Queensland Group's next field excursion will be a bus tour inspecting the remains of Lahey's Canungra Tramway and the Queensland Government Railways branch line with which it connected. Contact: Bob Dow telephone (H) 3375 1475 (W) 3864 1828 Email: dowmont@gil.com.au.

Proposal for Bundaberg Tour: August 2002

Details: Tuesday 13th August 2002 Dep Roma Street 1700 Tilt Train service Arrive Bundaberg 2115; Wednesday 14th August 2002 Hired mini bus tour of tramways; Thursday 15th August 2002 Dep Bundaberg 0500 Arrive Roma Street 0910 OR Dep Bundaberg 1019 Arrive Roma Street 1440 OR Stay in area.

Expressions of interest to: Graeme Prideaux, Box 2853, GPO Brisbane Qld 4001 or to Bob Dow telephone (H) 3375 1475 (W) 3864 1828 Email: dowmont@gil.com.au



LRRSA NEWS

MEETINGS

ADELAIDE: "Malcolm Moore and TACL"
A discussion will be held on the subject of Malcolm Moore and TACL locos which operated in SA. Members are asked to bring any photos or information they have.
Location: 150 First Avenue, Royston Park
Date: Thursday 4 April.

BRISBANE: "Light Railways in Qld"
Danny Sheehan will be showing slides of light railways in Queensland.
Location: BCC Library, Garden City Shopping Centre, Mount Gravatt. After hours entrance (rear of library) opposite Mega Theatre complex, next to Toys'R'Us.
Date: Friday 5 April at 7.30 pm. Entry from 7 pm. Contact Bob Dow (07) 3375 1475

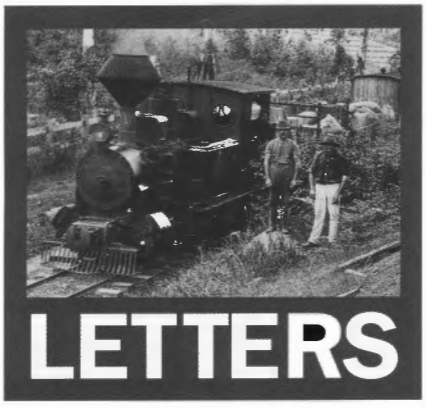
MELBOURNE: "Klondyke Goldrush of '97"
Frank Stamford will present an item on the Klondike Goldrush and the transport systems that resulted from it, including the White Pass & Yukon Route and other narrow-gauge railways.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday, 11 April at 8.00 pm.

SYDNEY: "Cuban Sugar Trains"
Ray Gardiner will speak about, and show colour slides of, his recent visit to Cuba.
Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).
Date: Wednesday 24 April at 7.30 pm. Contact Jeff Moonie (02) 4753 6302

MEMBERS' ADS

State Mine Heritage Park & Railway Official Opening

The SMHP&R is having an official opening on the last weekend in April. This will coincide with *Ironfest*, a local festival of metal art that showcases some of the region's best artists, in metal and other media. In addition, there will be a range of musical and heritage activities at the State Mine Heritage Park & Railway and other Lithgow venues, such as *Friends of Thomas the Tank Engine* at the Zig Zag Railway.
Date: Sat. 27th and Sun 28th April 2002
Times: 10:00am to 5:00pm
Venue: State Mine Heritage Park & Railway (off Atkinson Street), LITHGOW.
Entrance Fees: Adult: $5 Family Pass: $15 Children 5 to 16: $3 Concession: $3 Under 5: Free



LETTERS

Dear Sir,

Newington Wingrove & Rogers battery locomotives (LR 162)

I see that in a news item on the Millennium Park Railway the newly restored Wingrove & Rogers 4wBE is said to be one of Wingrove & Rogers 1604 and 1605 of 1940. I have some concern that this identification is incorrect.

Information I have received via Richard Horne from Wingrove & Rogers records indicates that builder's numbers 1603 to 1605 of 1940 were delivered to the Commonwealth Government for Maribyrnong Explosives Factory in Victoria. I believe Phil Rickard's research has shown that they were later at the Derrimut Explosives Factory, also in Victoria. Nine other similar units were supplied to the Commonwealth Government. Five (2174 to 2176, 2182 & 2215 of 1942) were despatched to Sydney, presumably for St.Mary's Munitions Factory. Four others (2216, 2217, 2230 & 2231 of 1942), despatched to Adelaide, were used at the Smithfield Ammunition Factory. All these were 0-4-0BE locomotives of Type W.217, 1½ tons in weight and fitted with connecting rods.

Wingrove & Rogers 1607 of 1940 was supplied to FW Fisher, Australia, for Newington Naval Branch, and it appears that 1608 was part of the same order. These 4wBE locomotives were described as Type "W.417 Special", weighing approximately two tons and with shaft drive to the axles rather than connecting rods. Builder's numbers 3845 & 3846 of 1948, also used at Newington, were also of Type W.417, although updated in appearance.

Both the destinations recorded in the builder's records and the design details of the locomotives concerned point almost inescapably to the 1940-built locomotive that has returned to Newington being builder's number 1607 or 1608. I would welcome any further discussion on this point, together with any information on the fate of its "twin".

John Browning
Rockhampton, Qld

Dear Sir,

Another Mystery Locomotive

As readers of *Light Railways* are no doubt aware, during the 1800's many light railways were laid at ports along the South Australian coast and a number of articles have appeared on this subject. Some of these lines extended inland and eventually became part of the South Australian Railways network. One such line was at Kingston in the south-east of the State. Laid and opened before the arrival of the light weight V-class 0-4-0WT locomotives, it was originally worked by horses.

Recently a friend passing through Adelaide inquired about a locomotive that was used when the line first opened and was described as "a makeshift engine." At the time it was assumed, wrongly it seems now, that the reporter was referring, perhaps sarcastically, to the miniature V-class. Now our friend has sent the following copies of news items from the local paper in the district, the *Naracoorte Herald*:

Tuesday, 14 December 1875. The first locomotive for the railway was to leave Port Adelaide for Kingston last Friday. As the jetty at Kingston is not strong enough for landing it, the vessel bringing it will be beached and it will be got out on a temporary tramway and so conveyed up the line. The engine weighs about 18 tons.

Other reports note the arrival of the locomotive at Kingston on 27 December on the vessel *Annie Taylor* and suggest it was converted from a portable engine. The *Naracoorte Herald* of 11 July 1876 describes the locomotive as "the makeshift engine' and on 29 August 1876 as "Puffing Billy". The locomotive was notoriously unreliable and the line was opened with horse traction.

As these news items predate the arrival of the first V-class locomotive at Kingston by over a year, it appears that this up to now 'mystery' locomotive must have existed. Further inquiries to the National Trust branch at Kingston and fellow railway enthusiasts have proved fruitless, although one long time Australian Railway Historical Society member thinks that an item may have appeared in a very early issue of the *ARHS Bulletin*.

Needless to say, any information on this 'mystery' locomotive would be appreciated.

Arnold D Lockyer
Dover Gardens, SA

ERRATUM, LR 163

Several readers have pointed out that the caption for the cover photograph of LR 163 is incorrect.

During the period when the shot was taken, the Richmond Vale Railway's ROD locos ran tender-first to Hexham, with the load, and chimney-first back with the empties.

However, there was one exception to the rule - an afternoon train which took specially mixed coal from the Hexham washery to Richmond Main power station. The late Ted Skiller's photograph shows this train, passing through Six-mile Loop.

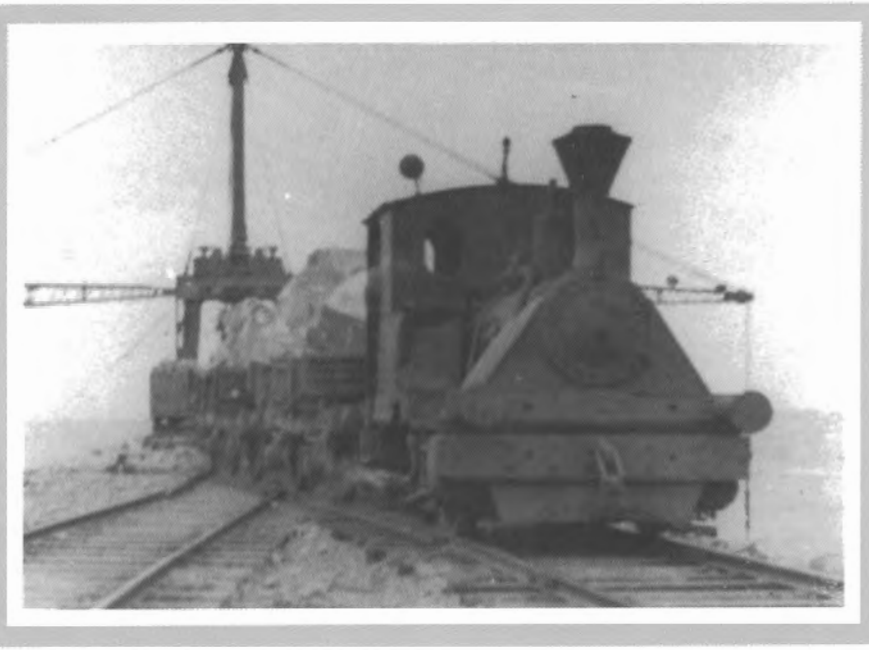
Where is it?

This photograph, which shows a decidedly continental-looking locomotive engaged in the construction of a breakwater, came with a collection of old prints given to the editor several years ago by old friend, and long-time LRRSA member, David Burke.

These photographs, covering a range of 'light railway' subjects, were the work of such stalwarts as John Buckland, Ken Rogers and Peter Duckett, and had been collected over a very long period.

Despite the appearance of the loco (and the fact that the subject of our last "Where is it?", in LR 152, turned out to be in Bolivia!), the source and appearance of this print strongly suggests an Australian origin.

"Fanny 52" (or something like it) is written on the rear of the print. Unfortunately, as a nickname for a small steam loco, "Fanny" is almost as common as "Coffee Pot".



A selection of books from the LRRSA Sales Department ...

Mountains of Ash
A History of the Sawmills and Tramways of Warburton - by Mike McCarthy
Describes a complex network of over 320 km of tramways which linked 66 major mills to the Warburton railway.
320 pages, A4 size, 280 photos (incl. 52 duotones), 50 maps/diagrams, (incl. 14 four-colour maps).
$59.95 Hard cover (LRRSA members $44.96) Weight 1500 gm.

Settlers and Sawmillers
A History of West Gippsland Tramways and the Industries they Served 1875-1934
by Mike McCarthy
168 pages, soft cover, A4 size, 96 photographs, 17 maps and diagrams, 6 graphs, one loco diagram, references and index.
$31.90 (LRRSA members $23.93) Weight 700 gm.

Bellbrakes, Bullocks and Bushmen
A Sawmilling and Tramway History of Gembrook 1885-1985 - by Mike McCarthy
104 pages, soft cover, A4 size, 71 photographs, 17 maps and diagrams, references and index.
$26.00 (LRRSA members $19.50). Weight 500 gm.

Arsenic and Molasses
A Pictorial History of the Powelltown Tramway and Timber Milling Operations
by Frank Stamford. All photographs are different to those in *Powelltown*. 88 pages, A4 size, over 100 photographs, 8 maps and diagrams, glossary and index.
$36.00 Hard cover (LRRSA members $27.00) Weight 650 gm.
$24.00 Soft cover (LRRSA members $18.00) Weight 470 gm.

Laheys' Canungra Tramway
by Robert K. Morgan, revised by Frank Stamford
Describes Queensland's largest timber tramway.
32 pages plus soft cover, A4 size, 28 photographs, plus maps/diagrams and index.
$9.95 (LRRSA members $7.46) Weight 220 gm.

Rails to Rubicon
A History of the Rubicon Forest
by Peter Evans
200 pages, A4 size, over 200 photos, many maps and diagrams.
$37.95 Hard cover (LRRSA members $28.46) Weight1000 gm.

Powelltown
A History of its Timber Mills and Tramways
by Frank Stamford, Ted Stuckey, and Geoff Maynard.
150 pages, soft cover, A4 size, 150 photographs, 22 maps and diagrams, references and index.
$22.00 (LRRSA members $16.50) Weight 550 gm.

The Innisfail Tramway
The History and Development of the Geraldton Shire Tramway and the Mourilyan Harbour Tramway
by John Armstrong & G.H. Verhoeven
128 pages, A4 size, 99 photos, 22 maps/diagrams.
$37.90 Hard cover (LRRSA members $28.43) Weight 650 gm.
$29.95 Soft cover (LRRSA members $22.46) Weight 470 gm.

Modernising Underground Coal Haulage
BHP Newcastle Collieries' Electric Railways
by Ross Mainwaring
60 pages, soft cover, A4 size, 18 photographs, 13 maps and diagrams, references and index.
$16.50 (LRRSA members $12.38) Weight 230 gm.

Tasmania's Hagans
The North East Dundas Tramway Articulated "J" Class by Geoff Murdoch, published by the author. 71 pages, soft cover, A4 size, 42 photographs, 2 maps, 38 diagrams/drawings, references and bibliography.
$20.00 (LRRSA members $18.00) Weight 300 gm

A Day in the Life of G42
Mixed Train to Erica - Thursday 18th March 1954 Photographs by Edward A. Downs, published by Puffing Billy Preservation Society. Very high-quality landscape format book of duotone photographs. 48 pages, soft cover, A4 size, 52 photos.
$35.95 (LRRSA members $32.35) Weight 280 gm

Echoes through the Tall Timber
The Life and Times of a Steam Man 1895-1984
by Dorothy Owen, published by Brunel Gooch Publications Life story of Harry Matheson, who drove logging winches, and mill engines in the Warburton-Powelltown area. 176 pages, soft cover, A5 size, 48 illustrations.
$22.95 (LRRSA members $20.66) Weight 375 gm

Firewood Tramways of the Walhalla Mines 1865-1915
A Research Paper on the History of the Firewood Tramways of the Walhalla Mines
by Terry & Brenda Jenkins. Published by T. & B.J. Publications.
272 pages, hard cover, A5 size, 96 photographs and maps, references and bibliography.
$30.00 (LRRSA members $27.00) Weight 530 gm

The Bonanza Narrow Gauge Railway
The Story of the Klondike Mines Railway
by Eric L. Johnson, published by Rusty Spike Publishing. History of a 3 ft gauge 31 mile long railway at Dawson City, Yukon Territory, near the Arctic Circle - Canada's most northerly public railway, which operated from 1906 to 1913. 164 pages, soft cover, near A4 size, 82 photographs, 13 maps, 34 drawings and other graphics.
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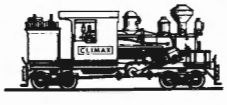

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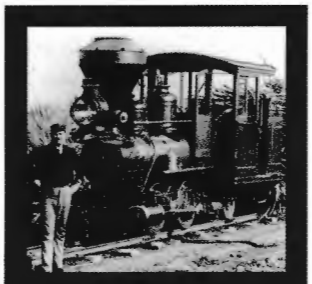


RESEARCH

Australian Forest History Society

Australian forest history and the Society now have a presence on the internet as an integral part of the Australian environmental history network established by the Centre for Resource & Environmental Studies at The Australian National University. The address is:
http://cres.anu.edu.au/environ-hist/afhsociety.html
The home page sets out the aims and objectives of the Society and provides information about its operations and activities. The Forest History section outlines the scope of the study and pays tribute to the contribution made by LRRSA researchers and its publications. An examination of Publications reveals reviews of recent environmental history publications. I found RJ Watson's review of Tim Bonyhady's *The Colonial Earth* particularly moving. Finally, an examination of Environmental History Links revealed this section is still under development. There were only three links there, including LRRSA, but clicking this link took me to Rail Page Australia. As it says, there is still development to be done there!
Editor, 12/01

Venus Mill, Charters Towers, Qld

During a recent visit to Charters Towers, David Burke visited Venus Mill, a gold crushing battery now owned by the National Trust of Queensland. The mill was established in 1872 and operated until 1973. Extensive restoration work has been carried out at the site and the mill is now operated as a tourist attraction. Between 1900 and 1946, the mill was powered by a 100hp steam engine. During David's visit, the guide indicated that the boilers were fuelled by firewood brought to the opposite bank of the river by a timber tramway, then transported to the mill by flying fox. Does any reader have any further information about this timber tramway operation?
David Burke 11/01

Jenbach 4wDM Loco at State Mine, NSW

A number of readers have commented on the 4wDM locomotive on display at the State Mine Museum at Lithgow. This locomotive is fitted with a 20hp single-cylinder diesel engine carrying a plate: "Jenbacher Werke, Tyrol, Austria, JW20, No. 5336". However, one of the axle-boxes has the initials "BFC", indicating that Bundaberg Foundry may have at least carried out some refurbishment work. A number of these locomotives were imported by Mining & Industrial Equipment Suppliers, Brisbane in the early 1950s, but limited information is available on the unit at State Mine. Recent advice from Graeme Quinn is that it worked at Hartley No.2 Colliery in the 1950s. Any further information about this loco would be much appreciated.
Ray Christison, 12/01

LRRSA Timber, Firewood and Gold Tour

The second Victorian Division weekend tour for 2001 broke new ground with a visit to the legendary mountain goldmining town of Woods Point on 1-2 December, the scene of hectic gold-mining activity in the first half of the 1860's before the "bust" in late 1865. Woods Point mania brought with it salted claims, extraordinary high yields, paper companies and worthless shares, all designed to fleece the gullible and greedy of their savings.
Of course, not all claims were worthless; the Alps Great Central had several very productive years and the Morning Star, created by an amalgamation of claims in 1902, periodically preformed very well for the next sixty years. But these were the exceptions. The town struggled on, experiencing a revival in the 1890's, 1900's and 1920's only to be virtually devoured by the Black Friday fires of 1939.
For some old mining towns the '39 fires spelt the end, but Woods Point was rebuilt, due mainly to the Morning Star Mine still being a good gold producer. The town exists today as a sleepy outpost of a hundred or so inhabitants, coming to life for a few hours on Saturday night when it seems that the entire population, plus visitors, cram themselves into the hotel bar!
Our party of a dozen assembled, in fine weather, on the Saturday morning and started with a good walk along several kilometres of the Morning Star's 3ft-gauge firewood tramway, dating from 1918 to 1936. Several interesting relics were examined prior to a picnic lunch, partaken in the bush. After lunch a descent along the firewood tramway's incline brought us to another tramway bench cut into the very steep hillside from where it was a further short descent to the Morning Star Creek, opposite the mine.
The second walk took us to Edwards Reef, one of the infamous scam mines, and along their firewood and ore tramways. A return to town gave us a view of the site of the Alps Great Central's mine. Our last walk was a short one, to see the Fermoy mine and its various attempts to locate a probably non-existant reef. It was one of Woods Point's earlier failures; its tramway bench, high above the Goulburn River, on a precipitous hillside, is quite spectacular.
Our Saturday evening meal was had at the Commercial Hotel, where one of the highlights of the meal was the placemats! These are laminated copies of Butler's map of Woods Point and district circa 1865. Although not to scale or entirely accurate, one has to remember the extreme hardship encountered by early surveyors and cartographers in this heavily forested, mountainous country. This map includes what must be one of Victoria's earliest mining tramways, that of the Alps Great Central, and our party members seemed to spend longer examining what was under their plate than what was on it!
Sunday's weather report brought news of impending showers so all haste was made to drive to Matlock to start the day. Here, we followed an old track down the hillside to the All Nations Mine's firewood tramway. Considering its age (last used c.1910), this tramway is remarkable in that sleepers and the occasional rail are still evident as the formation sidles around the mountainside. A return walk led us to the All Nations battery site, one of the more intact machinery sites in the mountains, although even here, the scrappers, "preservation-ists" and sundry idiots have wrought their destruction.
A return slog uphill followed, via the All Nations incline tramway to their open-cut mine where we stopped for our midday picnic. Lunch finished, rain started, and we set off along the Alhambra mine's ore tramway for a short distance to sample the terrain and better appreciate the efforts of the long-forgotten miners who constructed these works. On the homeward trek we paused near Fehring's Clearing to walk to Richard's 1936 Matlock sawmill. Here we paid homage to the remains of ex-VR W227, an 1882 Baldwin locomotive, the boiler of which lies rusting in the bush, a victim of the 1939 bushfires which devastated the mill.
Our sincere thanks are extended to the organiser and tour leader, Peter Evans, for his wonderful guidance, expert commentary, and fine set of tour notes, assembled from his forthcoming book, *Wooden Rails and Green Gold* (in prep.). Thank you Peter!
Phil Rickard

Mountains of Ash *artist, Owen Gooding, examines a 3ft gauge wheelset at the site of the Morning Star Gold Mine's firewood tramway, 1 December 2001.* *Photo: Phil Rickard*

Heritage &Tourist

News items should be sent to the Editor, Bob McKillop, Facsimile (02) 9958 8687 or by mail to PO Box 674, St Ives NSW 2075. Note new email address for H&T reports is: rfmckillop@bigpond.com
Digital photographs for possible inclusion in Light Railways should be sent direct to Bruce Belbin at: boxcargraphics@ozemail.com.au

NEWS

Queensland

BLACKWATER TOURISM & RECREATION PARK
1067mm gauge
Duaringa Shire Council
Ex-Cook Colliery Fox diesel personnel carrier 1 (323 of 1972) has been placed in this park, adjacent to the Capricorn Highway. It has been repainted yellow and appears substantially complete.
John Browning 2/02

Brampton Island 762mm gauge
Three four-wheeled carriages from the Brampton Island tourist railway were noted stored at the old Walkers shipyard, Harbour Road, Mackay, in late 2001. It is not known why these vehicles are here or how long they have been present. John Browning 12/01

BUNDABERG BOTANIC GARDENS RAILWAY
610mm gauge
Bundaberg Steam Tramway Preservation Society
Bundaberg Sugar Limited has donated the first locomotive to be built in Bundaberg to John Fowler & Co's design for canefied railways to the BSTPS. Bundaberg Foundry No.1, a 20-ton 0-6-2T, was launched with considerable public fanfare in 1952 (LR 153, p.19) and became No.10 on the Mulgrave Sugar Mill roster. Following dieselisation at Mulgrave in 1955, it became No.1 at Millaquin Sugar Mill before moving to Qunaba Mill in 1975 as its No.4. Following its withdrawal in 1980, BF1 was retained by the company for preservation and was placed on display at the Bundaberg Rum Distillery.
Bundaberg Sugar recently decided that, because the locomotive is of such historic importance to the town, she should be restored to her former glory as an operating steam loco. BF1 was moved by road to the BSTPS depot on 1 February 2002. BSTPS Secretary Ross Driver noted that No.1 was the first locomotive he drove when he began work at the Millaquin Mill as a 23-year old. He said it runs more smoothly and has better pulling power at low speeds than the locos currently operated by the Society. The $90,000 restoration project is expected to take several years. Once restored, BF1 will join other historic locomotives at the Bundaberg Botanic Gardens and give the public the chance to experience a ride. Since the railway opened 14 years ago, it has hauled more than 200,000 passengers.
ABC Local Radio 4/2/2002, via John Browning; *Bundaberg News Mail*, 2 and 23 February 2002

MACKAY RAILWAY HERITAGE RAILWAY INC, Mackay Outer Harbour 1067mm gauge
Clyde 0-6-0DH *McDESME* (DHI.3 of 1954) has been acquired from Pioneer Mill near Ayr and arrived at the group's Graham Heggie Street depot at Mackay Harbour around the start of February. It is in working order and will be used for shunting purposes in connection with the restoration and operation of two ex-QR BB18¼ steam locomotives. It is planned to restore the locomotive in its original livery, believed to be light green. Any information about this colour scheme would be gratefully received.
Peter Ford 2/02, via John Browning

STANNARY HILLS HERITAGE PRECINCT 610mm gauge
2002 marks the centenary of the opening of the first section of the Stannary Hills mining tramway in Far North Queensland. The line was extended to Irvinebank in 1907. With a total length of around 56km, this tramway system served the needs of the remote mining communities in the Cairns hinterland for nearly 40 years (see LR 30 and 32). The former Stannary Hills 4-4-2 locomotive No.4 (Borsig of 1907) is part of the ANGRMS collection at Woodford.
A Stannary Hills Revisited heritage celebration will be held on the Queens Birthday long weekend. Sunday 9 June is the big day at the former site of Stannary Hills – which ceased to be a town about 50 years ago. Features include a historic photographic display, the unveiling of a monument and a book launch. It is also hoped that there will be an announcement regarding the success of the nomination of the former tramway remnants for listing on the Queensland Heritage Register.
Ray Langford, 2/02

TOM CALLOW, Home Hill
1067mm & 610mm gauge
Tom acquired 2ft gauge Perry 0-6-2T *CARSTAIRS* (9351.34.1 of 1934) from the Lower Burdekin Historical Society in 1999. It is now stored on private property. Tom is also one of three owners of 1067mm gauge Hunslet 0-6-0T *INKERMAN No.1* (1119 of 1913), obtained from Inkerman Mill in 1995.
Tom Callow 1/02, via John Browning

PARKY'S PARTS, Maryborough, Queensland
2ft gauge
Ex-Isis Mill John Fowler 0-6-0T 11165 of 1907 has been at this Maryborough car wrecking yard since it was moved from a local park in 1983. It is reported that it has been purchased by Bauple Historical Society and that it will become part of a historical exhibit in the town of Bauple, south of Maryborough. This place was the location of Mt Bauple Sugar Mill that closed in 1950 and had a single Krauss locomotive on its short 2ft gauge tramway.
Bruce Macdonald 1/02

New South Wales

ILLAWARRA TRAIN PARK, Albion Park 610mm gauge
Illawarra Light Railway Museum Society
The Bushfire Crisis that lasted for three weeks from 24 December 2001 affected the ILRMS and other railway operators in New South Wales. One steam running day was lost due to Total Fire Bans, but the Society was able to run a "satisfactory" diesel service and revenues were not much affected. Barbeques in the picnic area also had to be placed "off-limits". Volunteers on duty were kept busy explaining to some of the public why they were unable to operate steam trains!
The February running day (9/2) featured the 1923 0-4-0ST Hawthown-Leslie loco *BURRA* supported by the nationally acclaimed "Wongawilli Bush Band" performing on site from 11am to 1pm. In contrast to the conditions experienced in early January, the ILRMS track gang had to repair a minor washaway caused by heavy rains prior to the running day!
John Garaty, 01-02/02; Brad Peadon 02/02

Coming Events

APRIL 2002
6-7 Puffing Billy Railway, Belgrave VIC. Thomas the Tank Engine comes to Puffing Billy – a family fun attraction at Emerald town. Also on 20th. Book with the Fat Controller: 03 9754 6800.
7 Wee Georgie Wood Railway, Tullah, TAS. Steam train rides, 12 noon-4pm. Last operating day of season. Phone (03) 6473 2228.
7 Booleroo Centre Steam & Traction Soc., SA. Steam and traction Rally. Phone (08) 8667 2193 for details.
21 Cobdogla Irrigation & Steam Museum, Barmera, SA. Steam Open Day. Phone (08) 8588 2323.
28 State Mine Museum, Lithgow NSW. Ironfest 2002, with official opening of the museum and heritage railway. Phone (02) 6353 1573 for details.
28 Puffing Billy Railway, Belgrave VIC. The Great Train Fair Fun Run, commences 9.30am. For entries ring (03) 9757 0775 or email: info@pbr.org.au.

MAY 2002
4-5 Puffing Billy Railway, Belgrave VIC. Thomas the Tank Engine comes to Puffing Billy – a family fun attraction at Emerald town. Book with the Fat Controller: 03 9754 6800.
10 Puffing Billy Railway, Belgrave VIC. The Brain Train – a moving feast of trivia on the Dinner Train, 7.30pm departure. Bookings essential: 03 9754 6800.
19 Bennett Brook Railway, Perth, WA. Friends of Thomas the Tank Engine Day with ng steam trains. Phone: (08) 9249-3861.
19 Cobdogla Irrigation & Steam Museum, Barmera, SA. Steam Open Day. Phone (08) 8588 2323.

JUNE 2002
8-9 Stannary Hills, QLD. Stannary Hills Revisited heritage celebration with historical photographs, unveiling of a monument, book launch and other attractions. Details from Ray Langford, (07) 4091 2993.
9 Cobdogla Irrigation & Steam Museum, Barmera, SA. Steam & Humphrey Pump Open Day. Phone (08) 8588 2323.

Heritage & Tourist

MENANGLE NARROW GAUGE RAILWAY 610mm gauge
Campbelltown Steam & Machinery Museum
The two working ex-Australian Navy, Newington Wingrove & Rogers battery-electric locos, one numbered N214, vanished from the site during the week of 7 January 2002. Nobody on site was able to advise where they went or when they departed. However, independent advice is that the owner sold them to the Millennium Park Authority and they will join their two 4wBE sisters, 219 and 220 (see LRN 104, p.5; LR 162, p.26), at Newington after restoration (see below). The two remaining working locomotives are the ex-Corrimal Colliery Robert Hudson supplied 0-4-0WT (Hudswell Clarke 1423/1922) and the Simplex 4wDM.
Ray Graf 1/02

MILLENNIUM PARKLAND RAILWAY 610mm gauge
Len King reports that there are three mistakes in the map of this railway published on the back cover of LR 161: Building 32 should be 31; Millennium Parkland is incorrectly spelt and Building 143 has been omitted. This building, constructed in 1897, is the 'issuing facility' which was built over the double-track section of line between the wharf and Lab A, Nos 140-145.
A visit on 6 February 2002 found further trackwork repair and replacement had been undertaken. The main line near the wharf up to Building 22 was being overhauled and completely relaid, with the isolated section near Building 138 being reconnected to form a loop. From Building 35 to 33 and 34, all track had been reinstated, new sleepers inserted where necessary, drains cleaned and points reinstated. This means that trains can now operate over the mangrove/riverside section for the first time in three years. At Building 18, all track and ballast had been removed and new material laid down, the points rebuilt and new levers installed. All points had been overhauled and correctly fitted with new tiebars and point levers, although the cast counterweights had still to be fitted.
A second Wingrove & Rogers BEV locomotive (ex-Menangle NG Railway, see above) was noted stored in the depot/workshop building in unrestored condition. It was charged and given a test run in January. It is planned that the original 1940s 4wBE locomotives will be used for hauling general maintenance trains around the parkland. Several of the original 4-wheel wagons have been purchased and will be restored. The prototype 4-car articulated set still awaits fitting of seats, roofing and brake rigging. The compressor had been rewound to 60v and trials conducted with the Westinghouse system to ensure compatibility with the Gemco locomotive supply. Len King, 2/02

STATE MINE HERITAGE PARK & MUSEUM, Lithgow
1435mm gauge
City of Lithgow Mining Museum Inc.
Work at the State Mine in recent months has focused on cleaning up after last year's fire. There has been a most encouraging response to the emergency appeal, the fire-damaged carriage shed has been demolished and volunteers are sifting through ashes and debris to find salvageable parts. 2-6-2T steam locomotive 2605 appears to be repairable, although further tests are required.
Work is continuing on railway infrastructure, despite the loss of operating rolling stock. The museum is now hosting three Work for the Dole programs, which are working on restoration and environmental projects and general grounds maintenance. The State Mine has a growing involvement with a developing metalworking industry in Lithgow. A resident blacksmith, Phil Spark of Spark Metal, now operates at State Mine creating artworks in the blacksmith's shop. Blacksmithing equipment relocated from the Chullora Railway Workshops is currently being installed and will be made operational for public demonstrations.
Under the strategy to establish Lithgow as a centre of excellence in metal working, the museum is actively involved in *Ironfest*, an arts festival focusing on metal-workers and celebrating Lithgow's place in the history of minerals processing in Australia. *Ironfest 2002* will be held at the State Mine on the last weekend in April this year and will involve over 30 artists exhibiting their works and performances by a range of music groups, including the Lithgow City Band, Lithgow String Orchestra and other artists. Celebrations will also include medieval reinactments and a medieval banquet to be held at the Union Theatre. The official opening of the State Mine Heritage Park & Railway will be held to coincide with *Ironfest*.
The Museum is developing a partnership with the Bathurst Goldfields Centre to assist in marketing the State Mine to school and educational groups. The two organisations are able to effectively showcase the working of the two great mineral resources of the NSW Central West – coal and gold.
Ray Christison, 02/02

VALLEY HEIGHTS LOCOMOTIVE DEPOT HERITAGE MUSEUM
1435mm gauge
Steam Tram & Railway Preservation Society
A 107-year-old steam tram carriage housed at the museum was completely destroyed in the recent bushfires. However, the museum was saved from greater devastation thanks to the quick efforts of local Rural Fire Service brigades. Six tankers from local brigades including the Valley Heights Rural Fire Service were quickly on the scene to help fight the fires, which also destroyed railway sleepers and large embankments of grass at the museum.
Built by the tramway workshop in Randwick, the tramcar was put into service in 1895 and finished service in Newcastle in 1935. It was the last known steam tramcar left in New South Wales and probably Australia.
John Garaty, 01/02

Victoria

BELLARINE PENINSULA RAILWAY 1067mm gauge
Geelong Steam Preservation Society
Further to LR 160 (p.29), ex-Pioneer Sugar Mill 0-4-2T *KLONDYKE* (Perry Eng. 271/1927) was disassembled for a boiler inspection in December 2001, when it was found that many tubes will require replacement. Ex-Australian Portland Cement (APC) 0-4-2ST No 6 (Hudswell Clarke 646/1903) was serviceable, but stored at the time of the visit. Restoration work on APC 0-6-0ST No 4 (Vulcan Iron Works 2541/1916, see LR 149, p.28) has completed the axle-box overhaul and the locomotive has been placed back on its wheels.
Rail News Victoria, 1/02

Heyfield & District Vintage Machinery Group 610mm gauge
This group owns the ex-Babinda Sugar mill 0-6-2T locomotive No 7 (Perry B/n 7967.50.3 of 1950), previously at Sandhurst Town and sold in 1996 (LRN 117, p.16 and 115, p.17). The locomotive was restored on a rural property near Heyfield, where some 600m of track has been laid using rail acquired at clearing sales and donations from the Broadmeadows army camp. In 2001, Loy Yang Power Station donated 400m of redundant track. This will be used to extend the Heyfield track and to create about 200m of track for the National Historical Machinery Association's rally to be held at Heyfield from 7-10 March 2003. No 7 was noted running at the Heyfield site in January 2002.
Advice via John Browning, 1/02; *Rail News Victoria,* 1/02

POINT NEPEAN QUARANTINE STATION 762mm gauge?
Parks Victoria
A Quarantine Station was established at Point Nepean, 1km from Portsea, on the eastern headland of Port Philip Bay in 1852. The Commonwealth Government transferred this site to the Government of Victoria in 1988 and it has now been opened to the public as part of the Mornington Peninsula National Park. A tramway at the Quarantine Station, which brought passengers' luggage and other items from the cliff-top above the pier to and through the autoclaves used in the disinfection process. A recent visit during a guided tour found the tramway restored with 4-wheel trucks in place to demonstrate the operation of the autoclaves. The tramway runs past the disinfection building and a wagon turntable provides access to the building for the hand-pushed trucks. Parks Victoria operates regular and very informative tours of the site. Ian Cutter, 01/02

PUFFING BILLY RAILWAY
762mm gauge
Emerald Tourist Railway Board
Further to our 'last minute' news report in LR 163, 2-6-2T 6A returned to service fitted with a Lempor type front-end arrangement and blast pipe. This arrangement was developed by LD Porta and used extensively in

South Africa to significantly improve the "draughting" of steam locomotives. 6A is now more efficient, more powerful and sounds quite different to its sister locos. The Minister for Transport, the Hon. Peter Batchelor, MP officially returned the loco to service on 22 January 2002.
The weekend of 9-10 February saw a busy time on the railway. There were six locomotives in service over the weekend to operate the normal public passenger trains, the *Friends of Thomas the Tank Engine* events, a chartered Lunch Train and the Night Train on the Saturday.
LocoShed internet discussion group, 1/02; PBR Web Site News, 3/02

WALHALLA GOLDFIELDS RAILWAY 762mm gauge
The WGR ran its first passenger train into Walhalla on 2 March 2002. It is planning to reopen the line into Walhalla in mid-March, with public operations into Walhalla scheduled from Saturday 16 March. Following that date, services will operate Saturdays, Sundays, and public holidays, with three trains each day. The new time table is: Thomson departures at 11am, 1pm and 3pm; Walhalla departures at 11.40am, 1.40pm and 3.40pm. The ex-Victorian SEC Fowler 0-6-0DM continues to be the main operating loco, as the 0-6-0T *Spirit of Baw Baw* (Henschel 25427/1956) has not yet been cleared for public service (see LR 161 p.29). 4wDH *KASEY* (EM Baldwin 3225-1-2-70 of 1970, see LR 157 p.30) is available as back-up loco.
John Cleverdon, LocoShed-group 2/02; Peter Medlin 3/02

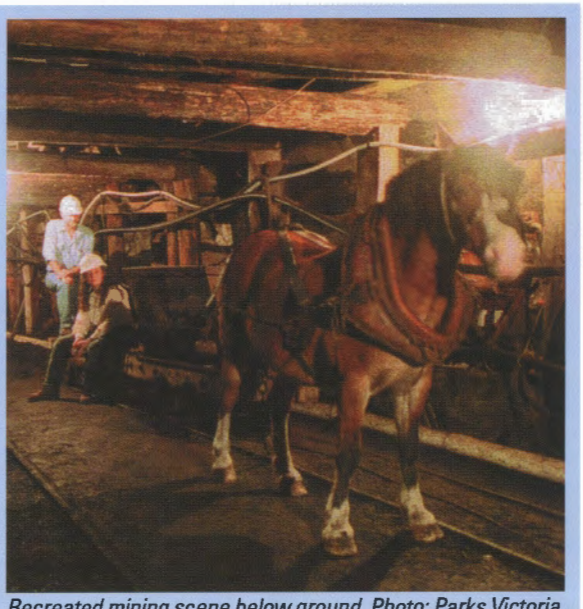
Tasmania

ABT WILDERNESS RAILWAY
1067mm gauge
Accidents and breakdowns on the recently completed AWR section between Rinadeena and Strahan (LR 163 p.29) in early 2002 provided ammunition for detractors of the project. The most spectacular was a derailment of a ballast train between Rinadeena and Halls Creek which left the track badly damaged, 0-6-0DM locomotive V13 (LR 162, p.29) and a hopper overturned and the driver was taken to hospital for observation after leaping to safety. It is reported that the train was travelling down hill towards Hall Creek when it "lost traction" and ran off the track before overturning in a most inaccessible section of the line. On Sunday 3 February, the afternoon passenger service came to a stop near Rinadeena when the steam loco lost power on the rack section of the line and was facing a "potential mechanical failure". The passengers on board were driven by bus back to Queenstown. The Railway advised its second steam locomotive was being used while the suspect engine is being checked out.
The problems brought a spate of accusations regarding civil and mechanical engineering problems with the rail infrastructure and the

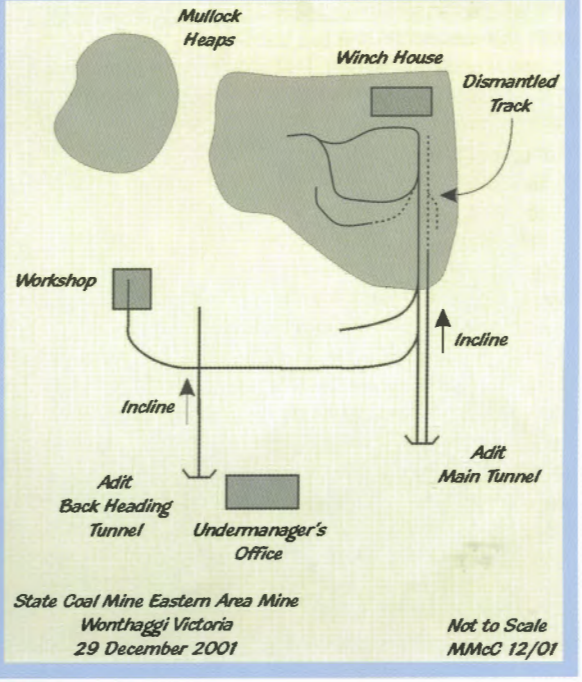
STATE COAL MINE, Wonthaggi

610mm gauge **Parks Victoria**

The State Coal Mine at Wonthaggi, which operated from 1909 until 1968, has been extensively upgraded as an operating tourist mine. Former miners and their descendants conduct regular tours through the mine, explaining the difficulties of life underground, embellished by stories of hardship and humour. Visitors walk through the mine and then experience a coal skip ride back to the surface. Self-guided tours of the buildings, including the museum and lamp room, are available on the surface.
A visit to the Eastern Area Mine on 29 December 2001 revealed many changes since 1997. The public facilities had been further developed and the displays, which previously, were very well presented, had been even further enhanced. Many historic photographs and diagrams complement the preserved former mine buildings. The good crowds present on the day show the reserve to be a popular tourist attraction, at least during the warmer months.
Trackwork about the site supports the current tourist operation (see diagram) and is considerably changed from that which existed in May 1978 (see LRN No 5, Aug 1978). Two-foot gauge access tracks are provided to both mine entrances. A siding serves the workshop while the incline to the winch house also leads to the mullock dump. Fresh spoil suggested that some recent tunnelling has been carried out. The circular loop at the top of the heap allows trucks to be turned, probably to even out wear on the wheel flanges.
There were 22 skips positioned on rails, 14 of which were in reasonably good condition and showing signs of recent usage. These are in addition to those involved in hauling passengers around the underground workings. Remains of many others and piles of much rusted rail and point fittings can be found near the mine entrances. *Mike McCarthy, 01/02*



Recreated mining scene below ground. Photo: Parks Victoria



A line of skips stored near the workshop, January 2002. Photo: Mike McCarthy

"inherent braking weakness in the runaway diesel locomotive." MLC Tony Fletcher called for an open inquiry into the Abt Railway project. *Hobart Mercury*; ABC Radio 4/2/02, via John Browning

BUSH MILL STEAM RAILWAY, Port Arthur 361mm gauge

The Bush Mill Steam Railway & Settlement was reported to have been on the market in March 2000 (LR 153 p.30). A sale did not eventuate at that time. This tourist complex is again offered for sale at an asking price of $1.2 million and details are available at www.bushmill.com.au/forsale/index.html. It is located on 4.079 hectares of freehold prime water-front land and approximately 1.8 hectares of leased land. The railway is described as: "Internationally recognised for its design and unique coal fired locomotives" and it "provides visitors with an exciting 4 kilometre journey through native bushland with water views." The rolling stock comprises two steam locomotives, one diesel works locomotive, five 16-seat passenger carriages and two small dropside wagons. The railway infrastructure includes two station platforms, footbridge, working signal box and various small lineside buildings, signals and displays. The railway itself incorporates a switchback junction and a 70 metre long by 8 metre high wooden trestle.

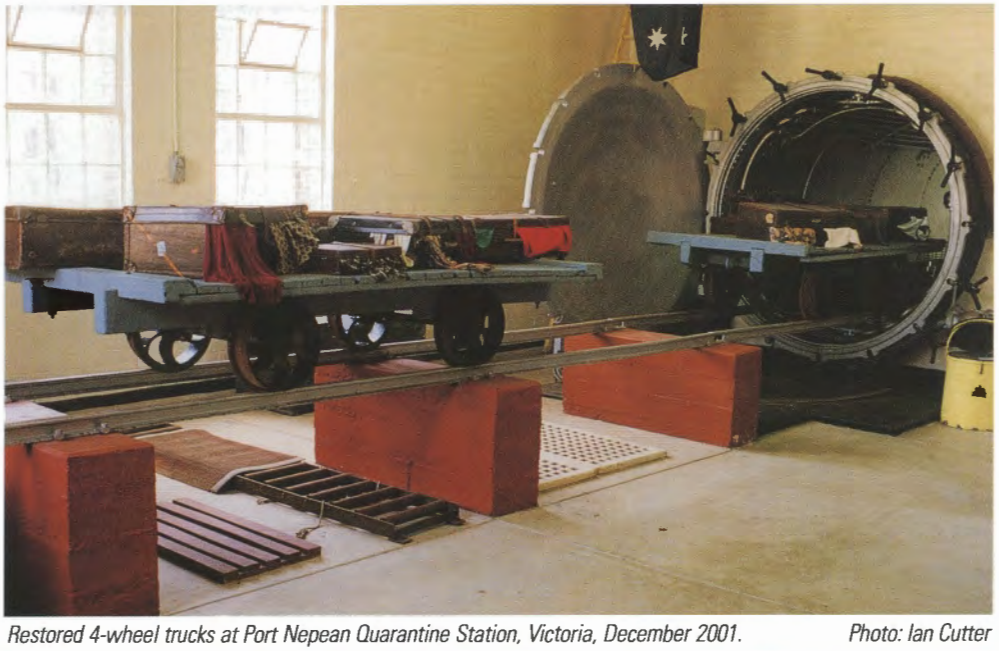
John Browning, 1/02

REDWATER CREEK STEAM & HERITAGE SOC, Sheffield

610mm gauge

The boiler removal from Composite Krauss 0-4-0WT (B/N 5682 & 5800) proceeded as planned in June 2001 (LR 160 p.30). It was found that the present boiler, built in Melbourne in 1937, had extensive corrosion of the tube holes in the firebox plate. It took some 20 days to remove the firebox from the boiler. Plans and specifications were then drawn up for an all-welded replacement firebox. The boiler was at the workshop of Eric Howe at Tarlton near Devonport in January 2002, where work was proceeding on repairs to pitting in the bottom of the boiler barrel. Completion of the boiler restoration

John Fowler 0-6-0T 11165 of 1907 certainly became somewhat overgrown while languishing at a Maryborough car wrecking yard. 18 February 2002. *Photo: Terry Olsson*



Restored 4-wheel trucks at Port Nepean Quarantine Station, Victoria, December 2001. *Photo: Ian Cutter*

The boiler of Krauss 5682/5800 is lifted clear of its frame, June 2001. *Photo: Peter Martin*

is now scheduled for July-August 2002, subject to finance.
Without an operating locomotive, SteamFest 2002 was to proceed on 9-11 March featuring the Howe family collection of steam equipment, items from the Historical Machinery Club and the Tasmanian Tractor Pulling & Vintage Tractor Club. Peter Martin 01/02

Western Australia

BENNETT BROOK RAILWAY, Whiteman Park 610mm gauge **WA Light Railway Preservation Assoc. Inc.**
The National Trust (WA) has placed the Planet 0-4-0DM (FC Hibberd 2150 of 1938) and three ore hoppers obtained from the Lake View & Star Gold Mine, Kalgoorlie by WALRPA in 1976 on its register of important historical, moveable railway heritage. The locomotive is regarded as the oldest operational internal combustion locomotive in Western Australia and one of only two locomotives of its vintage preserved in the State. It was restored to operating condition over an extended period for use on work trains, then placed out of use before receiving further restoration work in 2001. It has been considerably altered, re-engined and had other modifications for operating purposes. Several of the ore hoppers, built by Malcolm Moore, probably in the 1950s, have been cut down for rebuilding as carriages, but three remain in original condition. In October 2001, the historic set of locomotive and two wagons were used on embankment strengthening work on the Mussel Pool branch.
Ex-South African Railways 2-8-2 NG 118 (Henschel 2447/1938) has been taken out of service for major boiler repairs, which may take up to three years to complete. In January 2002, sister locomotive NG 123 *FREMANTLE* (Franco-Belge 2670/1951), which has been out of service for several years, had its valve gear stripped down and the cylinders re-bored. It is hoped to have this unit back in service for the 2002 steam season. 0-4-2T BT1 (Perry 8967.39.1) was undergoing its annual inspection and service, with all the valves and glands being stripped and repacked.
David Whiteford 02/02; *BBR Members Newsletter* 02/02, Simon Mead 02/02

HANNANS NORTH TOURIST MINE, Kalgoorlie 610mm gauge
Clarifying the report in LR 163, Hannans North Tourist Mine and the Mining Hall of Fame are located adjacent to each other and entry to the latter is via Hannans North Mine with a single entry fee for both attractions. The passenger surface tramway described and photographed in LR 163 (p.31) is actually at the Hannans North site. As at December 2001 the 4wBE locomotive was still not operational, as the company cannot get new batteries for the locomotive. The train is still on view to visitors to the mine and stands in the open among other surface displays.
David Whiteford, 02/02

KING BATTERY, Kalgoorlie
A conservation report has recently been released for the King Battery, 47km SSE of Kalgoorlie-Boulder. This battery, owned by the Hampton Plains Estate Ltd., operated for little more than two years from its commencement in March 1902 but today is a major relic of the gold mining industry, with substantial remains. Included in the report are details of the light railway system that connected various shafts in the area to the battery. Formations and other evidence of the system still exist. King Battery conservation plan.
David Whiteford, 02/02

Overseas

LAUNCESTON STEAM RAILWAY, Cornwall, UK 610mm gauge
This narrow gauge steam railway has returned its fourth Hunslet 'Quarry'-type 0-4-0ST locomotive, *DOROTHEA* (763/1901), to operating condition. The transformation from rusting hulk to immaculately presented steam locomotive was the result of years of dedicated effort by the LSR co-owner, Kay Bowman. *DOROTHEA* was officially returned to service on 23 December 2001.
The LSR links the historic town of Launceston with the hamlet of Newmills over a picturesque 5km route. It operates daily in July-September, for 8 days over Easter, 6 days from the Spring Bank Holiday Sunday, Sundays-Wednesdays in June and during the half-term week in October. LRRSA member John Hill is a volunteer on the LSR, which extends an offer for guided tours over the railway to any LRRSA member visiting Cornwall.
John Hill, 01/02

Bennet Brook Railway: The ex-Lake View & Star Gold Mine Planet 0-4-0DM and two of the three surviving LV&S hoppers on ballast duties in October 2001. Simon Mead is operating the Bobcat. *Photo: David Whiteford*

Bennet Brook Railway: Contractors re-bore the cylinder of ex-South African Railways 2-8-2 NG 123. Photo: Simon Mead