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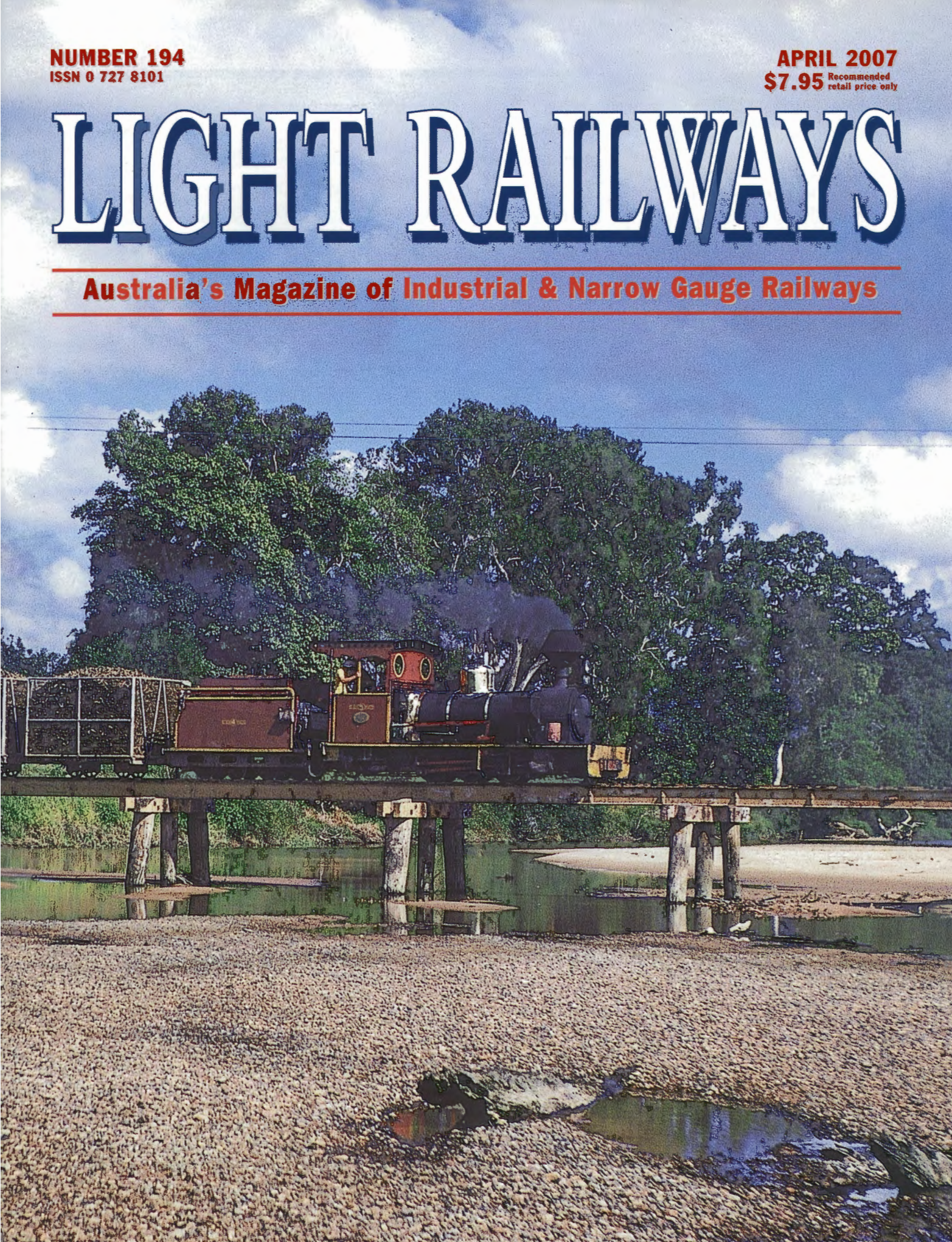
LIGHT RAILWAYS

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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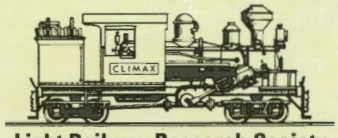

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Conversions:

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

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Comment

I was chatting to a fellow enthusiast the other day about the truly remarkable job that the Ferrocarril Austral Fueguino (FCAF) in Argentina had done with its steam locomotives (see report on page 29). In response to increasing work loads on the railway, the locomotives were rebuilt to modern standards to dramatically improve their performance, rather than being replaced by more powerful new motive power (at considerable expense).

However, while I don't suggest that the FCAF has reached such a point, I wondered exactly when it is that steam locomotives become so sophisticated they cease to exude the sort of charm that makes the general public want to ride behind them in the first place? Is there potentially a point at which they can become so 'efficient' that passengers feel it may as well be a diesel?

It's not as silly a question as it may sound. Despite the old saying, I don't really believe that form always follows function (just look at what was done in the 1930s to the Victorian Railways' handsome fleet of locomotives). A more efficient front end is generally not a better-looking one and, apart from the aesthetics, advanced exhaust drafting arrangements can flatten out a locomotive's beat. Oil or gas firing means no evocative smell of coal or wood smoke, and no open fire to be fed with shovels of coal or lumps of wood by a traditional fireman. Eliminating steam leaks also eliminates much of the atmosphere. In addition, (and this one really alarms me) an ultra-efficient steam loco would beep, not toot, since an air horn is a far more energy-efficient warning device than a steam whistle.

Finally, a very Happy 75th Birthday (today, in fact, as I write this) to that great Australian icon The Sydney Harbour Bridge which, like so many great engineering projects of its era, utilised quite a bit of 'light railway' activity in its construction (see LR 139 and LR 133).

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.

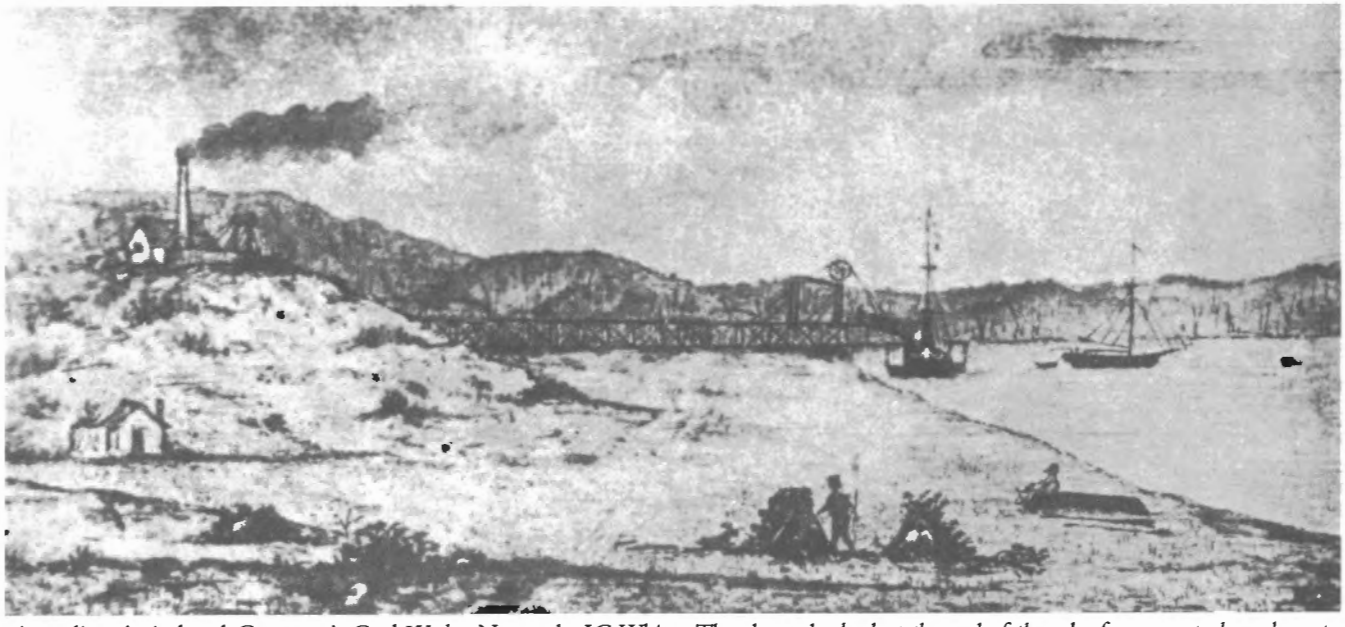
Members are actively involved in researching light railways in libraries and archives, interviewing knowledgeable first-hand participants and undertaking field work at industrial sites and in the forests.

Light Railways is the official publication of the Society. Material submitted is subject to editing, and publication is at the discretion of the Editor.

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

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

Front Cover: *In August 1972, CSR Macknade Mill's Hudswell Clarke 0-6-0 number 5 (1548 of 1924), trailing the tender from sister locomotive number 4, brings a train of loaded bins across the Herbert River Bridge, bound for the mill. Photo: John Shoebridge*



Australian Agricultural Company's Coal Works, Newcastle, JC White. The elevated wheel at the end of the wharf appears to have been to allow the chute to be raised and lowered slightly. The 'Sophia Jane' is being loaded, while the 'Lambton' is moored nearby.
Webber collection. ARHS Bulletin *March 1968, courtesy ARHS nsw Railway Resource Centre*

The Australian Agricultural Company's first incline railway, Newcastle NSW

by Jim Longworth and John Shoebridge

Introduction

On 10 December 2006, a ceremony was held in Newcastle to commemorate the 175th anniversary of the opening of the first railway in Australia. This iron-railed, self-acting incline, some 300 metres long, was built by the Australian Agricultural Company (AA Company) to connect their coal mine with their Hunter River wharf. Its industrial nature has generally meant that this most important milestone in our nation's progress is generally overlooked or at the best, relegated to a short sentence in our history books

The following article sets out the circumstances under which the mine was established and describes the coal pit, the incline and wharf. It concludes with a contemporary description of the events on the opening day in 1831.

Government coal pits at Newcastle

Coal had been mined at Newcastle in a desultory fashion since the 1800s. In the beginning, sailors and convicts scrabbled coal from outcrops then waded out from the shore with baskets to load small ships. As the colony became more dependent on coal, mining rights were restricted to the Crown, prisoners were employed to extend the tunnels and vertical shafts were sunk. Horse-driven machinery was introduced to raise the coal and wharves were constructed, allowing the more rapid loading of larger vessels. Even so, with few skills and little investment, coal winning and transport remained expensive, wasteful and brutal.[1]

The working of these mines, referred to as the 'Government Coal Works', was one of the matters investigated by Commissioner Bigge at the behest of the Colonial Secretary during his assessment of Governor Macquarie's administration. In his 1823 report, Bigge strongly favoured the assignment of convicts to private individuals and businesses rather than their continuation in government service. He recommended that the Coal Works be leased to private enterprise and that, in the meantime, a suitably qualified mine manager be employed to oversee operations. John Busby was recommended as such a person and in 1824 he was engaged and took passage to Sydney.[2] On proceeding to Newcastle, Busby made a number of improvements in the method of winning and shipping coal, and he recommended that the use of convict labour should be dispensed with as soon as practicable.[3] Meantime the Colonial Office had commenced negotiations with the Board of the newly formed Australian Agricultural Company. The Company was chosen as the only body in New South Wales with sufficient resources to be able to operate the mines, which were, despite their inefficiency, deemed to be essential for the prosperity of the colony.[4]

The Australian Agricultural Company

Primarily at the instigation of Australian expatriate John Macarthur, the Australian Agricultural Company had its genesis at a meeting held in London on April 1824. Supported by a group of wealthy British investors, it was incorporated as a joint-stock company under Royal Charter by Act of Parliament by the end of the year. The stated purpose of the company was to seek a grant of one million acres of land on which to raise fine wool sheep "on the condition that certain sums of money be expended in the development and improvement of the land so given."[5]

The AA Company was organised on the lines of the celebrated East India Company and was controlled by a London-based 'Court of Governors' (or Board). In turn, the Court delegated day-to-day matters to a 'Local Advisory Committee' whose members resided in New South Wales supported by an office and full-time secretary in Sydney. Management of the AA Company's operations at Port Stephens was by means of its 'Agent', initially- Robert Dawson who was appointed in 1824. Dawson was a farmer's son and former steward of a rural Berkshire estate and it was he who selected the original landholding to the northwest of Port Stephens.

The site of the AA Company's 'A' Pit in December 2006. *Photo: John Shoebridge*

Establishing the AA Company's collieries

Once the AA Company's London-based 'Court of Directors' accepted the coal mining proposal in principle, they proceeded to set up a 'Colliery Establishment' headed by John Henderson, an experienced colliery manager (designated as 'Viewer'), at that time in charge of Lord Elgin's Fifeshire collieries in Scotland.

Initially the company had requested a grant of 2000 acres of coal-bearing land, but the British government countered this proposal with an immediate grant of 500 acres to allow mining to commence, with the decision on the remaining 1500 acres to be postponed until the colonial Governor (Darling) had sent in his report (presumably on the company's activities). A despatch was prepared, setting out these terms and instructing Governor Darling to put the company in possession of 500 acres of their choice and to render Henderson any reasonable assistance in the working of the mines.[6] Around the same time, the company commissioned a report by John Busby regarding the state of the Colonial coal mines, and presumably this was made available to Henderson to assist in the selection of mining machinery, etc.[7] In any case, Henderson made the necessary purchases and recruited suitable employees, then, armed with the above document, proceeded to Portsmouth to embark on the sailing ship *Australia*. Thus, in July 1826, the 28 men, women and children comprising the 'Colliery Establishment' commenced their six-month long voyage to New South Wales.

These were neither unwilling convicts nor impoverished farm labourers. Henderson and most of the other men were accompanied by their families, and specialist trades were represented by James Steel, the 'brakesman' (ie winding engine driver); and Adam Howitt, the 'engine smith'; together with a 'sinker', a 'collier', a 'corfe weaver' (ie a coal-basket maker) and two 'colliery labourers'. Loaded on the same ship, along with sheep and horses for the company's rural settlement, was the requisite hardware for setting up a modern coal mine, including two steam engines, pumping plant and a mile-long 'iron railway'.

Stalemate

Henderson was under instructions that once in the colony he was to act under the authority of the NSW Agent, Robert Dawson, but it appears that no complementary instructions were sent to Dawson.

Following the party's arrived at Port Jackson in January 1827 Henderson eventually met Governor Darling. He presented his despatches but to no avail, and although he was permitted to visit Newcastle to survey the mines and prepare plans, he was not given possession of the government mines. Dawson was reluctant to render assistance and appeals to the Local Committee were to no avail, its members being of the opinion that mining in competition with the government would be unwise.[8]

Indeed the Governor even attempted (unsuccessfully) to have the company's steam engines and mining machinery put at his disposal. So there was nothing for it but to return to London and consult the Board. Whilst awaiting a ship, Henderson did some desultory boring along the Parramatta River while Steel supervised the safe storage of the steam engines in a Sydney warehouse.

Once Henderson departed, the local committee disbanded the Colliery Establishment and the indentured employees were sent to Carrington to be employed at other tasks. With them went the remaining colliery plant, including the iron railway. One authority has claimed that there were plans to use it on a plantation on the Manning River.

At Carrington, Howitt continued in his trade as a supervisor of blacksmiths and Steel worked with him as a smith. Steel's two sons, aged 16 and 14, were employed in the blacksmith's shop as a hammerman and a fireman. Within a year, only these four, together with labourers William Boles and George Bethel, remained of the original coal mining party.[9]

Back on track

In London, Henderson briefed the Board, which then sought audience with Mr Huskisson of the Colonial Office.

The company offered to abandon the whole project, but amended terms were offered which persuaded them to continue. These included the 2000-acre lease, as initially requested, the promise of a supply of convict labour and a 31-year monopoly on coal mining in the Colony.[10]

Although these privileges exceeded the expectations of the Directors, the Colonial Committee was still not in favour of the proposal. The will of the London Board prevailed, however, and at their behest and on their behalf, Dawson formally accepted the government's offer on 9 January 1828. Shortly afterwards, Dawson was summarily dismissed by the Local Committee.

When this news reached London, the Board of Governors determined that Dawson's replacement should be someone possessing sufficient experience, authority and standing to represent the AA Company's interests without the assistance (some might say, interference) of the corrupt Local Committee. Their selection was the recently knighted Captain Sir William Edward Parry RN, a former Arctic explorer and naval hydrographer, on non-active service on half-pay. Parry arrived in Sydney during December 1829.[11] As the company's Commissioner armed with the power of Sole Attorney, Parry proceeded immediately to disband the Local Committee and to introduce various systems of discipline and accountability into the company's affairs.

Henderson returned from London in April 1830, reporting on arrival by letter to Parry, who instructed him to inspect and report on the state of the stored steam engines in Sydney and then to meet him on the ground in Newcastle on 7 May. Following this meeting, Henderson, now described as 'Superintendent of Coal Mines', commenced a boring program to determine the coal holding to be sought from the government. He was given funds to cover expenses in arranging housing and rations for the remaining members of the Coal Mining Establishment who were to be repatriated to Newcastle.

Joining the group were a clerk, William Croasdill, to oversee the accounts, and Andrew Turnbull described as a "carpenter, engine-smith and engineer". He replaced Howitt, who had been dismissed for drunkenness and wife beating. Five 'useful' convicts were sought and assigned with six more promised. At the end of May the boring appliances arrived on board the AA Company cutter *Lambton* and it was arranged that the government forge would sharpen company tools.[12]

Construction

Finally, on John Henderson's recommendation and with Sir Edward Parry's approval, the site for the new mine was selected. The shaft was to be sunk on the side of a hill just west of the town boundaries. Locating the pit here, outside the town limits, kept it wholly under AA Company control and beyond potential government interference.

Plans for the engine house were received from England but were rejected, presumably because the design did not meet local requirements. Over the closing months of 1830, John Armstrong, the company surveyor, drew up a plan for the engine house, specifications were prepared and tenders invited. Progress on sinking the pit went well, a drain for carrying off surface water was dug and a road made up the slope to improve access to the site. About 300,000 bricks were made under contract in the small brickyard near the top of the shafts. A second small pit to provide boiler coal was sunk, also under contract, whilst the main shaft was being excavated. Cut stone from Pyrmont was shipped in for the engine house, but softer Waratah sandstone sufficed for the foundations for the steam engine and was sourced from Mr Platt's property, some five miles up-river.

By July 1830 they were ready to erect one of the steam engines and James Steel, now promoted to 'engineer' was sent to Sydney to supervise their loading. They arrived in mid-August aboard the ship *Norva* and were placed in the government lumberyard for safekeeping.[13]

After a good start in sinking the pit through soft surface strata, a band of extremely hard rock was encountered slowing down progress to nine inches per day. On two occasions the water pumps were damaged whilst blasting though this layer. A drainage adit was driven from the shaft to the surface on the ocean-front, so water did not have to be lifted the full depth of the shaft. Both the coal and drainage water would be raised by the single steam engine with the second engine kept in reserve.

Henderson prepared a rough sketch for the self-acting inclined tramway, for consideration by Parry. James Steel "made some models for various contrivances on the wooden or level portion of the inclined-plane which appeared to be ingenious". Sir Edward approved, so they were adopted.

Their joint plan proposed that the inclined plane, sloping at 30 degrees and around 130 yards long would descent the hillside on a low embankment. At the foot of the grade the rails would continue atop a level timber trestle for the remaining 200 yards to the river. Here a wharf would be built with its seaward end 13 feet above the high water mark capable of loading vessels of 300-400 tons. An elevated frame at the end of the wharf was designed to support an apparatus enabling the coal trucks to be placed directly over the ship's hold.

Work was commenced, with a pile-driving engine erected on the beach to construct the wharf. Each pile was sheathed in copper to deter Cobra borers. The structure extended into the river far enough to provide 12 feet of water at low tide. Several buoys were placed in the fairway with anchor and chain-cable procured from the government lumberyard, so ships could moor just clear of the wharf structure whilst loading.

On the hill, construction continued, including: sinking the pit; building a blacksmith's shop; roofing the workshop; erecting pit-head gear; and forming up the bank for the inclined plane. Round timber was gathered and prepared to build the level railway across the river flat. Eventually one hundred and forty loads of timber, each of 40 cubic feet, would be used on this elevated trestle.

Sir Edward was well impressed with the work in both plan and execution and indeed his diary notes indicate that he spent Wednesday 2 February 1831 at Port Stephens loading the cutter *Lambton* with the 'rail-roads' and other iron-work that had been stored there whilst the plans were in abeyance, for shipping to Newcastle.

Work on laying down the railway did not always go well. The free men who had contracted to lay down the rails, according to local custom, would go missing for a day or two to drink and idle away their time before coming back to work. Nevertheless the inclined plane was completed by late September 1831, together with all the upright timbers for the level part of the line. Work on constructing the gangway with rails along the wharf then commenced. Although wet weather was delaying completion of the coal shoot at the end of the wharf, the company commenced the issue of coal to the government and public at the pit top on Monday 26 September 1831. For the time being, it was delivered by horse dray.

Opening of the incline

On Saturday 10 December 1831, the company's new wharf and inclined plane were officially opened, accompanied by cheers and rising hope for a more certain and prosperous future. A newspaper report reads:

As the Sophia Jane *proceeded majestically towards the wharf, two wagons, each containing a ton of coals, were seen descending the inclined-plane from the pit's mouth, with flags flying, and amidst the cheers of the Company's servants; two empty wagons being drawn up the plane at the same time, by the descending weight of the full ones. The latter then travelled along the level rail-road with great rapidity to the end of the wharf; and the bottom of the first wagon being dislodged by a single blow from a hammer, three hearty cheers from every person present announced the instantaneous discharge of the first ton of coals into the vessel.*[14]

Parry was somewhat more circumspect, writing in his diary:

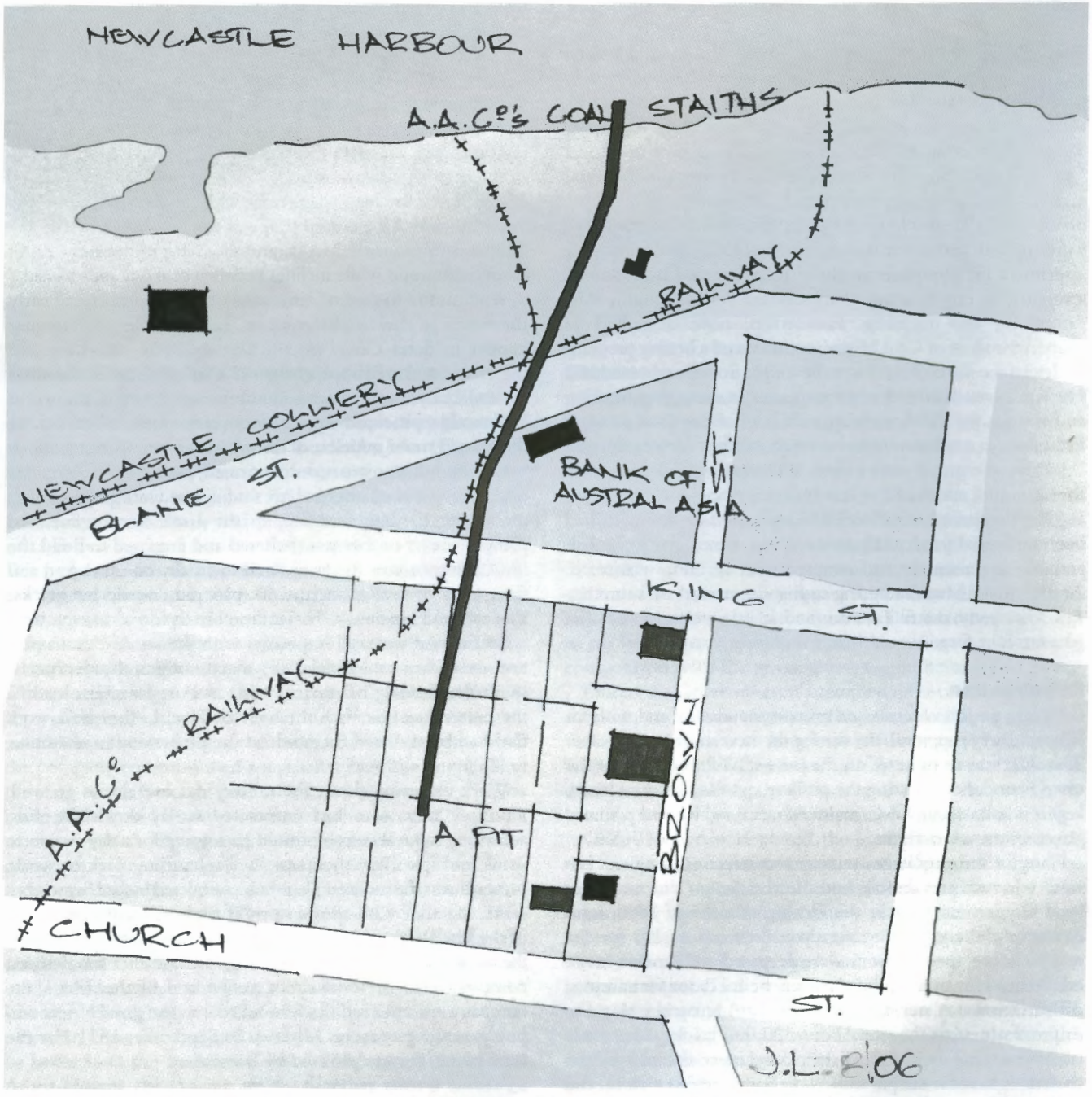
Arrived at Newcastle [at 9:30am]. *Embarking on to the* Sophia Jane, *with several other Gentlemen, proceeded in her to open the new wharf in due form delivering two tons to Captain Biddulph gratis.* [Left Newcastle at 11:00am].[15]

Operation

To bring the works into more general public notice, and thus encourage demand for the coal, Parry prepared a brief description of the works for the *Sydney Gazette*. It read:

The coal being raised to the pit's-mouth, is shot into a large clean coal yard, enclosed by a substantial brick-wall, and capable of containing between one and two thousand tons of coal. From the gates of this yard an iron rail-way is constructed the whole way to the end of the new wharf: a distance of three hundred and thirty yards, or nearly one-fifth of a mile, of which one hundred and thirty yards next to the pit's-mouth are on an inclined plane, and has a double [track] railway, and the other two hundred yards are nearly on a dead level to the end of the wharf.

The wagons, each holding exactly one ton, and of which from fifteen to twenty are provided, are lowered down the incline plane [under



Location of the AA Company 'A' Pit in the north-western corner of the intersection of Brown and Church Streets and route of the incline. Plan compiled from maps: Cadastral map of Newcastle, N.S.W., with relief shown by hachures and bathymetric soundings, Map 72 from Ferguson Collection, on verso "533"; "No. 303"; Cadastral map of Newcastle, N.S.W., also showing locations of Australian Agricultural Company's coal pits, Map 51 from Ferguson Collection, 1850-1857; Map 395 from Ferguson Collection, Ms. tracing of unknown original, showing layout of Newcastle, holdings of the Australian Agricultural Company and other cadastral information, National Library collection

their own weight] by a rope passing round a very large wheel [at the upper extremity of the plane], the other end being attached to a certain number of empty wagons, which are thus drawn up by the weight of the full ones [descending]. The rope is unhooked when they reach the level, and three of them being linked together and being pushed to the wharf by one man [or two men], the coal is instantly discharged into the vessel's hold by a long shoot, ingeniously contrived to overhang the vessel, simply by knocking out a bolt, and thus dislodging the bottom of the wagon.

The inclined plane above described is formed by a bank of earth, coated with sods on each side to hold it together; but the level part of the rail-way is supported on a strong wooden frame of solid timber, elevated from ten to fourteen feet above the ground. As the Maitland-road passes under a part of this rail-way, a sort of drawbridge, which one man can lift, is so constructed as to enable drays to pass when loaded unusually high.[16]

The 'A' Pit colliery

Although the above reports describe the incline and wharf, little is said regarding the colliery. The winding engine, supplied by R&W Hawthorn & Company of Newcastle-upon-Tyne is described as being of 20 horsepower and working at 20 lb/sq inch. The only mention of the boilers is that they were placed in store along with the engines, indicating that they were not of local manufacture. The pumping arrangements described were in common use at that time and would have comprised a series of lift pumps set in the shaft connected by rods and levers to the engine crank shaft so whenever the engine ran, the pumps were put in motion.

To assist ventilation, the main shaft was divided in two by means of a central wooden brattice. This confirms that corves (woven baskets) were used to raise coal. By this date, we can assume they were delivered to the pit bottom on 'rolleys' (flat-top trollies) running on wooden or iron-shod rails. With regard to the winding rope, Parry mentions that Henderson was having problems obtaining hemp rope of suitable strength.

On the surface we are told the corves were dumped into the 'clean coal yard', perhaps implying some form of refuse picking, as screening was many years away. Here coal ready for the market was stored awaiting the arrival of shipping. This required hand filling into the incline trucks. Some 15 to 20 of these were in service and no doubt there were sidings and storage track here for that purpose.

The incline brake wheel would most likely be set between massive masonry or brick walls above the end of the rails. All would have been built in line with the latest practice on Tyneside where most of the self-acting inclines in Britain were at that date located.

The AA Company eventually went on to become a major player in the 19th Century coal trade of New South Wales, opening a number of large mines and constructing a considerable railway network in and around Newcastle.

Authors' Note:

One source gives the incline's gauge as NSW standard gauge (4ft 8½in). However our analysis of the recorded dimensions and illustrative material of the coal tubs indicates that the gauge was narrow, we think about 2ft to 2ft 6in.

Some of the technical matters yet to be determined are: The type of rails used: were they wrought or cast iron? If the latter, were they edge or plate rails? Regarding the design of the vehicles, we know they had bottom doors and that there were 20 or so of them, but little else. Last, there is the matter of the type of rope: was it hemp or wire? If the latter, was it round or flat?

This plaque, located close to where the original wharf once stood, was unveiled on Sunday 10 December 2006, the 175th Anniversary of the opening of the AA Company's railway. Photo: Graham Black

Conclusion

Underground railways in mines date back to the early 1500s in central Europe, while inclines between coal pits and riversides were common in coal mining areas of England from the early 1600s. The successful construction and subsequent pioneering operation of an incline from pit to wharf by private enterprise was, however, a significant technological advance for coal mining in Australia. Light railway technology would continue to be used in most underground coalmines in the Hunter Valley until replaced by conveyor belts for coal haulage, after which it remained in use in some mines for transporting men and materials. Inclines, did not become commonly employed in the Hunter Valley because the gently undulating topography allowed use of conventional adhesion railway technology.

Remains of the 'A' Pit are still to be found on the site in the form of a levelled earthwork pad and part buried bricks. The pit and its incline were significant in the early development of the Australian coal industry, and growth of the city of Newcastle. Surely the site warrants official listing and conservation as a heritage item of State if not National significance.

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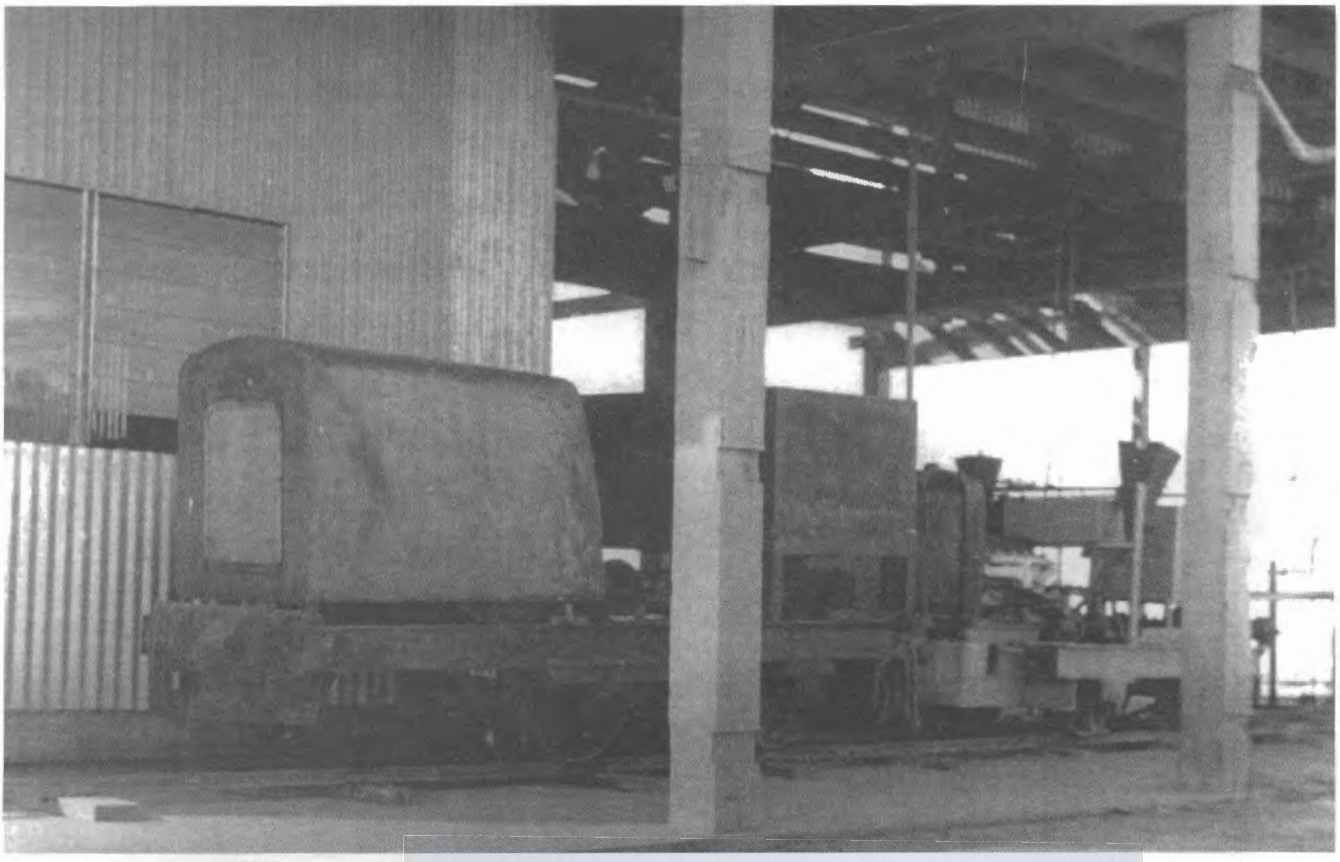


Two of the three petrol locomotives then in use at Mulgundawa were stored in the shed when the author visited there on 10 November 1959.

Salt lake tramways at Mulgundawa

by Arnold Lockyer (photos by the author)

The author's first knowledge of Mulgundawa, located between Langhorne Creek and Wellington in South Australia, came from a sketch map prepared in May 1955 by Australia Paper Manufacturers Ltd, who were then harvesting salt there. The sketch included "a railway for tractors"!

It was four years before I was able to inspect the site, on 10 November 1959. No one was working there at the time of my visit and my notes show: "*Visit to salt field revealed – (1) Trackage principally of a temporary nature, used only during salt harvesting, of 2 foot gauge. (2) Three locos, powered by Chev., Ford and Oldsmobile Car engines.*"

I think this latter information came from a man who arrived there as I was leaving, as I was only able to photograph two locos, one of which was stripped for overhaul, and I did not see a third. I also photographed three of my children on what appeared to be an old, very battered Harbors Jetty tramway truck, regauged to two feet.

Ten years elapsed before I visited the area again, on 12 January 1969. Australian Paper Manufacturers Ltd was still in occupation and I was able to speak to the manager, Mr Wilson, and an employee, Mr Chandler. In the time since my previous visit, the three locomotives had been replaced by a single unit, which appeared to be a rebuild of the largest of the original locomotives. I was told that the original three locomotives had standard motorcar gearboxes, which gave them multiple forward gears but only one reverse. This made it necessary to provide a balloon loop during salt harvesting, so that all hauling was done with the locomotive travelling forward. Apparently one locomotive, during an overhaul, had its gearbox wrongly replaced, with the result that for a time it had several reverse gears but only one forward.

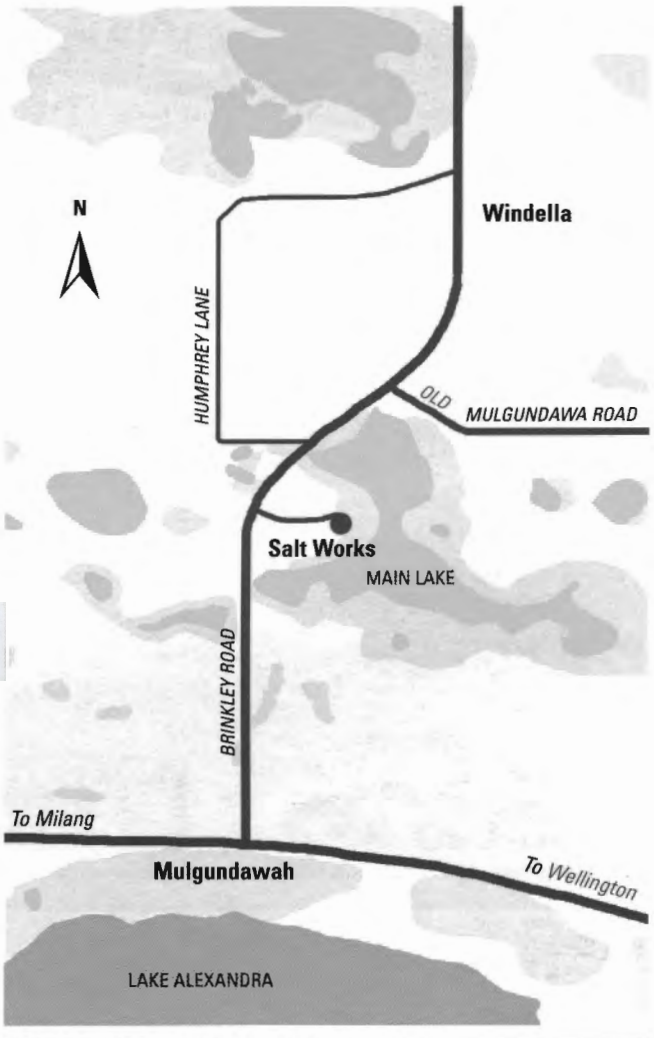
The single unit now in operation had been fitted with two gearboxes, giving it several gears in either direction of travel. This had eliminated the need for a balloon loop and had reduced the track required to a single line across the lake. The locomotive also carried around 60 gallons (270L) of water as ballast, to improve its adhesion. Other rolling stock on the line included about six standard one-yard capacity, side-tipping, steel hopper trucks, together with spare trucks and various spare parts.

My next visit to the area was on 1 January 1985. This being a public holiday, no one was on the premises, but notices indicated that the plant was now being operated by the Langhorne's Creek

The Lockyer children, Richard, Peter and Judith, pose on a well worn 4-wheel service truck, 10 November 1959.

Salt Company. The single locomotive appeared to be the same one that was there in 1969, though it looked as if it had been fitted with a replacement engine. Other rolling stock comprised about six side-tipping trucks and two flat trucks, which had been made by removing the upper parts from a couple of side-tippers and laying a floor on the undercarriage.

The track layout included a single line across the lake plus a separate section of track along the edge, for the storage of the side-tippers. Also stored along the lake's edge was a large supply of track panels, for use during salt harvesting.



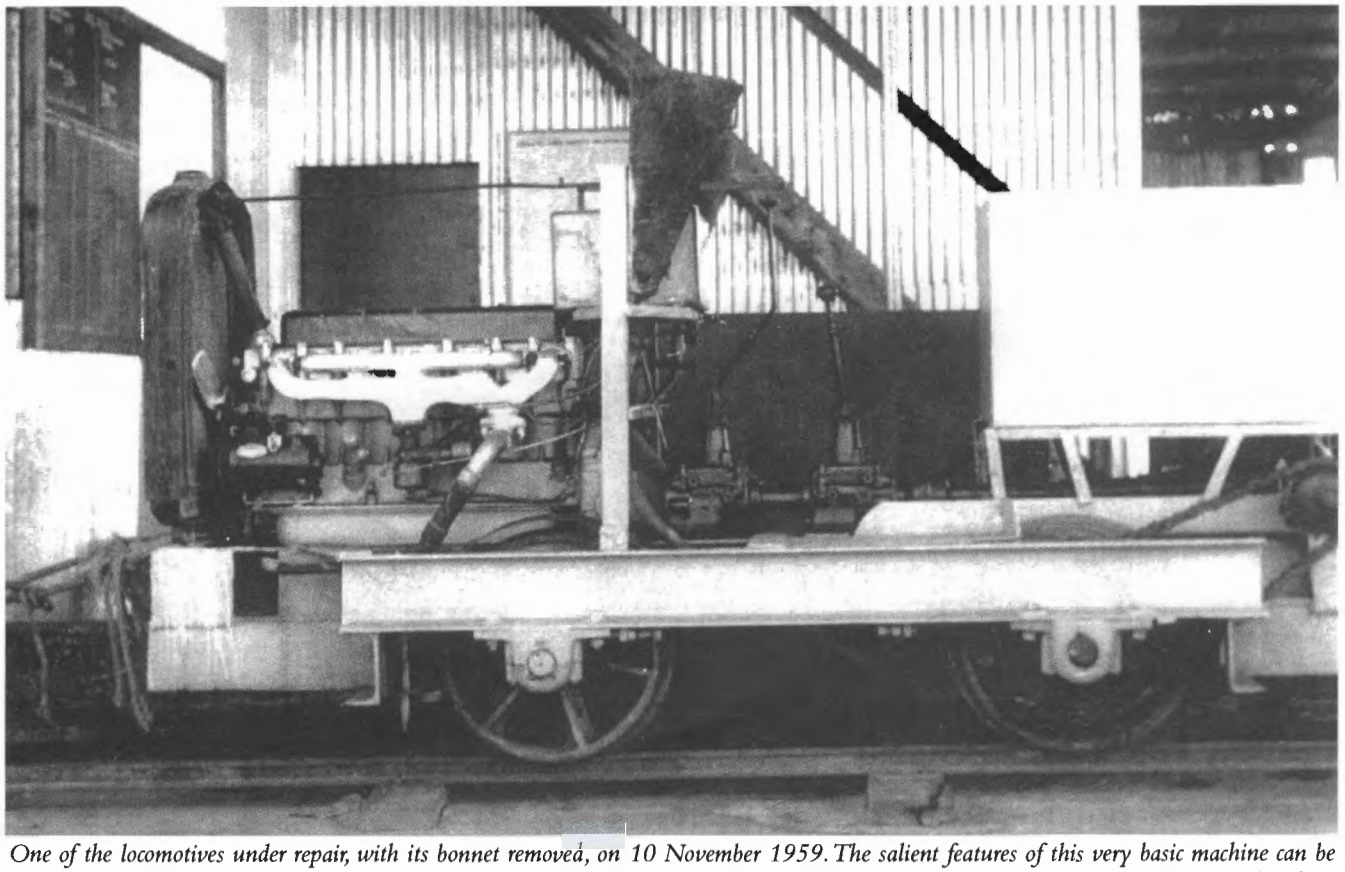
Mockridge's Report

In 1995, I received a copy of the following report, prepared by Mr R Mockridge, then Chief Engineer for the Cheetham Salt Company, of a visit he made to Mulgundawa in June 1950. It contains quite a lot of interesting information, including the name of the original salt harvesting company at Mulgundawa, Salt Limited, which was apparently part of the Robern Dried Fruit Co., though I believe that his description of the three locomotives as all being built from "1927 model 4-cylinder Chevrolet motor cars" is incorrect, given what I was told nine years later. Mockridge states:

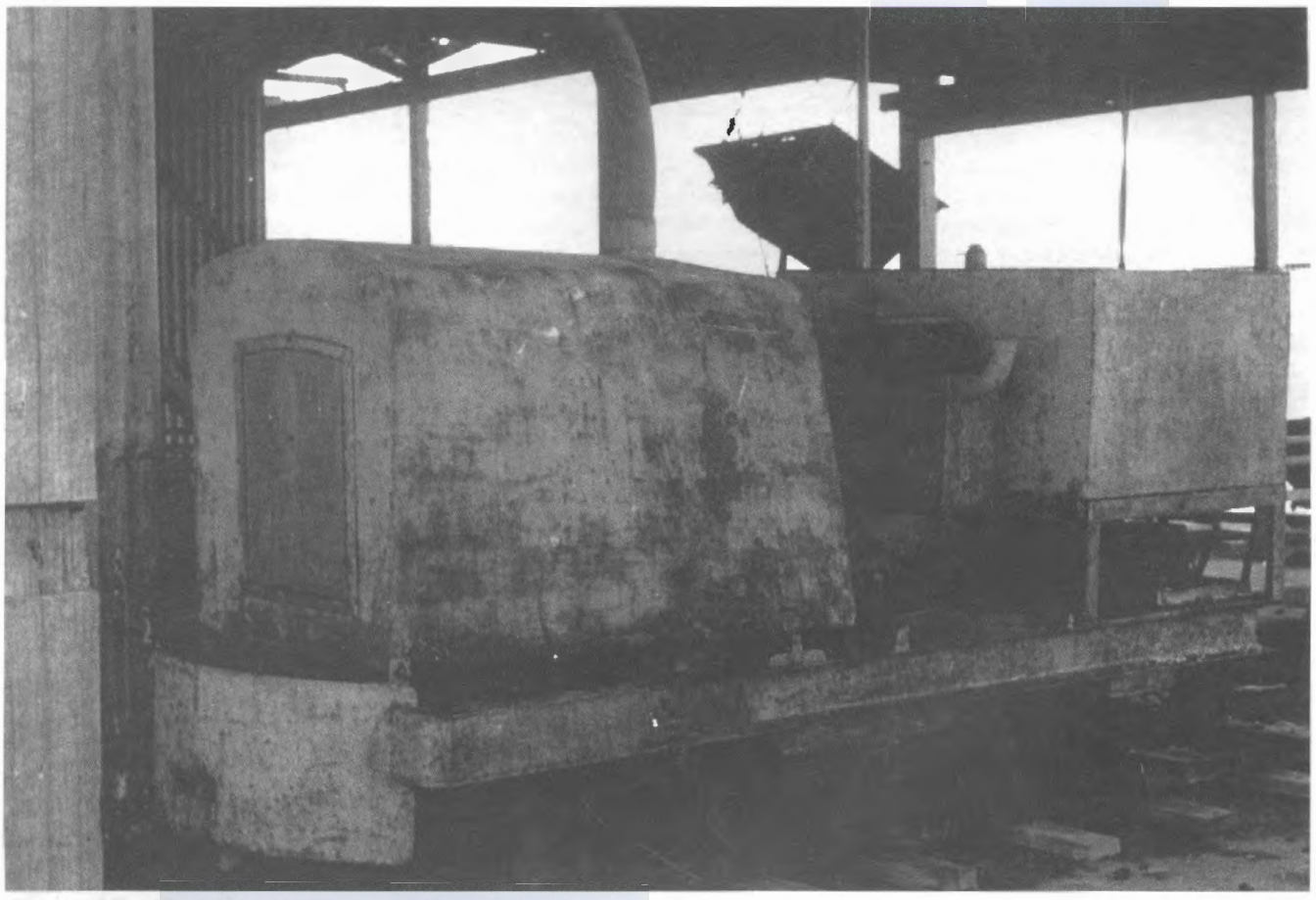
In June 1950, I visited the salt making operation at Lake Mulgundawa with the view to Cheetham Salt acquiring the concern. The Robern Dried Fruit Co. put up the whole of the capital invested in Salt Ltd, which company operated Mulgundawa and adjoining Lakes.

Leased by the Company at Mulgundawa are:-

The main Mulgundawa Lake on Section 208 leased from Mrs Bowman until 1960. A small adjoining Lake on Section 209. About half of a large lake situated part on Section 215 and part on section 218. This lake is owned by a Mr Forrest and a Mr Botts, and Salt Ltd holds that part of the Lake on Section 215 owned by Mr Forrest on an annual lease.



One of the locomotives under repair, with its bonnet removed, on 10 November 1959. The salient features of this very basic machine can be clearly seen, including the former motor car engine and radiator, twin gearboxes, the tank of ballast water (to counterbalance the weight of the engine) and the simple construction of the frame, with unsprung rolling-bearing axleboxes and skip wheels.



The rebuilt locomotive that was in use at the time of the author's second visit, on 12 January 1969.

A small lake of about 10 acres on the other side of the road west of the main lake, leased on an annual lease from Mrs Bowman for no charge apart from the royalty obtained from the salt. 500 or 600 tons were harvested from this lake last year, but normally it is the practice to pump the brine under the road onto the main lake.

The water from the main [small?] lake is pumped by means of a pipeline onto the main lake and during this pumping they take the whole of the brine on the lake, as there is no dividing wall between Forrest's and Bott's lease. At the present time there is a large amount of salt on this Lake being a layer at least 1½ inches thick over practically the whole area except around the edges and about 6 inches depth of what appears to be almost full brine.

A considerable amount of work has recently been done in facing with stone many of the division walls across the small lake and whilst I was there, three men were employed on maintenance work on one of these walls.

Harvesting Methods and Plant

The main lake from which practically all their harvest is obtained is divided into about six areas, three of which are used for harvesting. No.1 being 21 acres. No.2 x 15 acres and No.3 x 18 acres in extent. Salt being harvested was very hard, and was cut into large sections by means of a portable circular saw in about 10 feet wide strips each way. It is lifted by means of large forks into one cubic yard and ¾ cubic yard trucks, estimated to hold an average of six tons per truck. A 14 lb portable tramline runs from the lake to the washing plant and three rakes each of eight trucks hauled by a small petrol driven locomotive are used. Eight men are engaged on gathering the salt, one to each truck.

At the washing plant, trucks are tipped into a three-compartment hopper, where the salt is crushed by means of a toothed roll at the bottom of each compartment with the assistance of a vertically operated fork arrangement to break up the larger lumps before they enter the roll. Salt is screwed from the bottom of the hopper, via an elevator, to the salt pump, where it is mixed with clean brine from a 500,000 gallon concrete storage tank from which it flows by gravity to the pump and is thence pumped through a five-inch galvanised iron pipe to the stacker. At the stacker the salt is separated from the brine over a 14 mesh steeply sloping sieve, the salt being elevated into the stack by a rubber conveyor belt, and the brine returning to the concrete storage tank.

The tramline is in good order, the trucks appear to be in good order and all are fitted with ball bearings. The company has 25 side-tipping trucks. The three locos, although rather a primitive type and built from 1927 model 4 cylinder Chevrolet motorcars, were all reconditioned last year and seem to be running satisfactorily. They would be valued at one hundred and fifty pounds each.

Maximum harvesting rate is about 530 tons per week, but this has seldom been obtained this year, the output ranging from 200 to about 350 tons per week. I was unable to get to the bottom of the low rate of harvesting this year compared with last year, the excuses given being shortage of labour earlier in the year and a lot of wet weather, but I would not be surprised if they have had a lot of trouble with their washing plant. Whilst we were there they had a choke in the screw beneath the hopper, and were washing this screw out to clear it with fresh water from the Murray Bridge water supply, which a company representative said has been a God-send since they obtained it.

Factory

The Factory is housed in a wood and galvanised iron building, but most of the galvanised iron is in a bad way and will soon have to be renewed. Corrugated fibrolite for this purpose has been purchased by the company.

Salt is carted from the stack into the mill by means of trucks on a tramline, tipped into an underground hopper and elevated directly

into the dryer, after being crushed in a set of Canz rolls. The dryer is direct fired and some of the salt in stock which I inspected was very much off-colour due to a smoky fire which is a continuous source of trouble. After leaving the dryer the salt is again crushed to the required grain and passed over the vibrating sieve, when provision is made for bagging-off three different grades at the one time.

Three men are required to operate the factory, which runs on three shifts, six days per week and sometimes on Sunday as well.

Bagging of crude salt is done at the stack by means of a small type of loader similar to the Barber-Green Loader with a screw on either side of a bucket elevator, and as this washed salt from which all the fines have been removed does not set very hard, it should be quite satisfactory.

General

Most of the company's salt for New Zealand now is carted by road to Port Adelaide on diesel trucks owned by Robern Dried Fruits Co., but sometimes when petrol driven lorries are used the cost goes up considerably. Loads of 14 tons are carried on the diesel units.

Labour Position

The labour difficulty has been overcome for the present by employing Balts[1], but from all accounts they have a very high labour turnover even with these men. The Balts are taken to Murray Bridge twice a week for English lessons and on Saturday night to the pictures. They run their own mess, but the company pays one of their men to act as a cook, one hour before lunch and two hours before dinner when he knocks off to get their meals.

The accommodation is very primitive and not very clean, and cooking facilities very poor. Some of the men batch[2] for themselves, the Enginedriver and a maintenance man living in the small brick building used as the engineroom and workshop and another man has a tent put up inside the large building used as a store for bags, etc.

Jack Balfour's railway

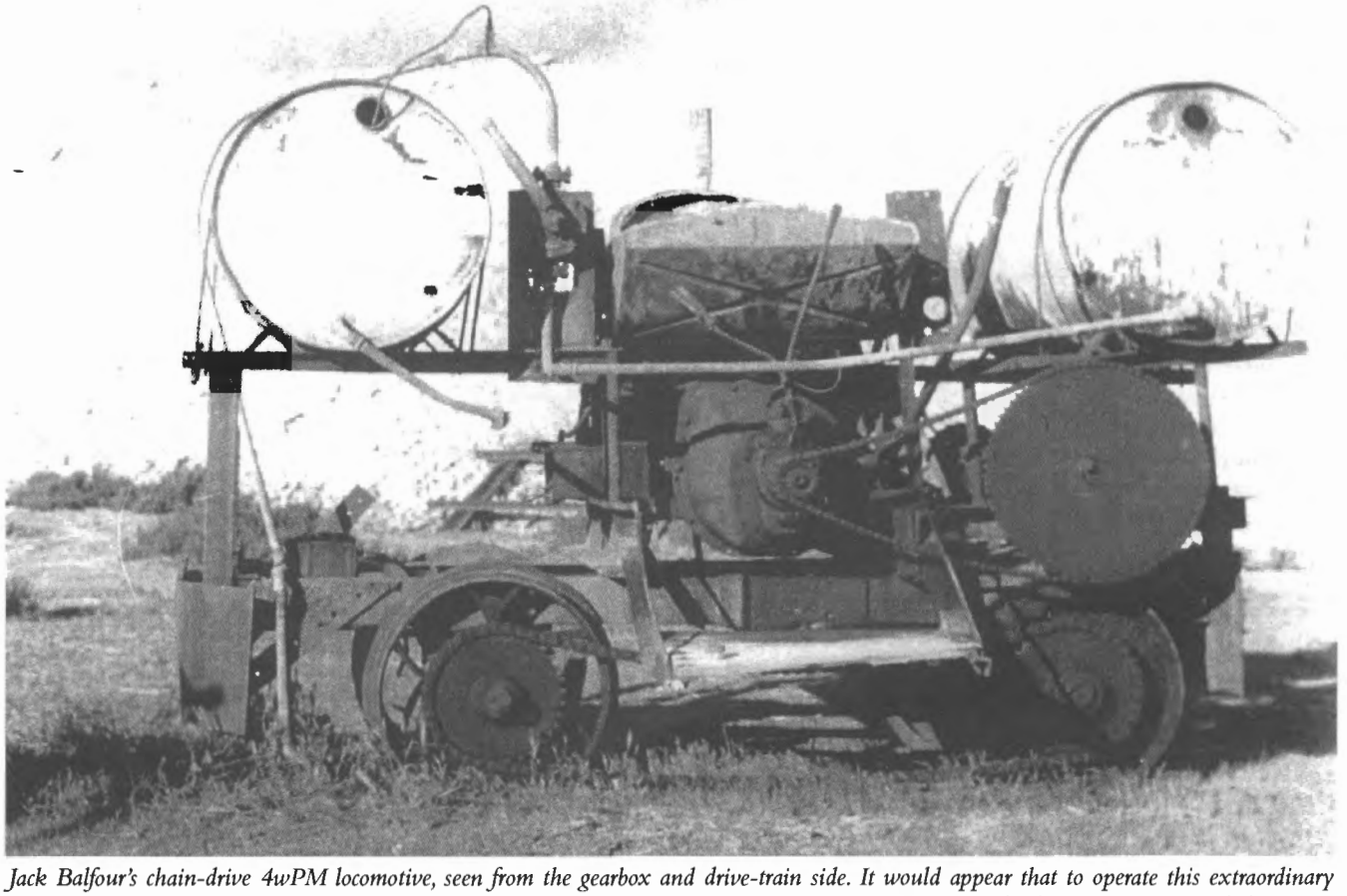
At the time of my visit in 1959, there was another smaller salt lake in the vicinity being worked by Mr Jack Balfour. He had a short line of 2ft gauge track only used during salt harvesting, a few 1-yard steel side tipping trucks and a homemade locomotive, which almost defied description. It was powered by a Chevrolet 4 car engine and had two 44-gallon drums mounted transversely fore and aft, probably containing water ballast. The engine was also mounted transversely – somewhat predating the Morris Mini East/west motor! At the time, salt harvesting was not in progress and the locomotive and trucks were 'stored'.

In about 1963, Mr Balfour advised that he had abandoned his operation at Mulgundawa and moved all his plant, including his locomotive, trucks and track, to Port Parham, north of Adelaide on St Vincent Gulf. He also said that the Army was compulsorily acquiring a tract of land, which included the salt lake he wished to work, to extend the Port Wakefield Artillery Proof Range, and he had been ordered to move out. He refused to move, but the Army proceeded with its plans and, so far as he knew, his locomotive and other equipment were still there, "probably blown to bits".

Mr Balfour had, at this stage, begun legal action against the Commonwealth, claiming damages. However, I believe that before the case came to court Mr Balfour died. The fate of his railway equipment is unknown.

Salt is still being harvested at Mulgundawa, by Mulgundawa Investments Ltd, though the tramway ceased operation some time ago.

1. Severe labour shortages in the years following World War II prompted the Australian Government to recruit from overseas. Many workers came here from the European Baltic States, which had been overrun by the Germans then the Soviets. Officially 'New Australians', they became known collectively as 'Balts', irrespective of their actual country of origin.
2. The term "batch" means for a man to fend for himself (as bachelors do).



Jack Balfour's chain-drive 4wPM locomotive, seen from the gearbox and drive-train side. It would appear that to operate this extraordinary machine the driver stood on the platform which extended out from the frame between the wheels, perilously close to the uncovered chain.

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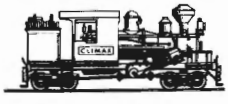

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Leaving no doubt as to their location, Mossman Central Mill's Com-Eng 0-6-0DH locomotives COOK *(AL3372 of 1964) and* IVY *(AL4181 of 1965) depart Tolentini siding with full bins on 20 September 2006. Mossman mill have five Com-Eng 0-6-0DH locomotives with usually four operating as coupled pairs.*

Far North Queensland Sugar Mills – 2006

by Peter Attenborough (photos by the author)

Introduction

During mid to late September 2006, Greg Travers and I had the opportunity to visit far north Queensland. This being the height of the sugar crushing season it allowed us the opportunity to witness activities at a number of mills stretching from Mossman in the north, as far south as Inkerman at Home Hill. As we had previously toured the region in 1994 and again in 1996, we were eager to see what developments had taken place at the various mills during the intervening years.

Although we had inspected a number of the mills during the mid-1990s, we had not had the time to see operations at South Johnstone, Macknade and Victoria mills. Well before our departure it was decided that these were a 'must do'.

The following notes, presented on a mill-by-mill basis, are not intended to be definitive but rather a brief report on the limited observations during the time of our visit. As an aside, one thing that quickly became evident was the devastation caused by Cyclone Larry in late March 2006, not so much to the mills and canefields but to the far north Queensland region in general. Considering that it was exactly six months after that event that we toured the area, I cannot see any way that all damage will be repaired in time for the commencement of the 2006/2007 wet season.

Mossman

Operations at Mossman Central Mill were essentially the same as ten years earlier with no alterations to the locomotive fleet or the manner in which the locomotives were used, nor had there been any significant modifications to the locomotives or their livery. Com-Eng 0-6-0DH *DOUGLAS* (AL2562 of 1963) was undergoing maintenance on each occasion that I visited the mill, with Com-Eng 0-6-0DH locomotives *COOK* (AL3372 of 1964) and *IVY* (AL4181 of 1965) operating as a coupled pair while all other locomotives ran singly.

The days of 24 x 7 operation had been scaled back so that the mill only operated Monday to Friday at the time of my visit. The one noticeable change was the introduction of mesh-sided bins whereas in the mid-1990s I had only observed solid-sided canetainers. Having said that, the great majority of canetainers were still the more traditional solid-sided type.

Mulgrave

The locomotive fleet at Mulgrave Mill at Gordonvale was the same as in 1996, but the hours of operation of the mill had been reduced to Monday to Saturday. One noticeable difference after such a long period between visits was how the city of Cairns has grown with the suburbs encroaching on former cane land as far south as Edmonton.

In 1996, cane trains destined for the Redlynch area crossed the QR main line and the Bruce Highway in the centre of Edmonton. This arrangement has now been replaced with a flyover across both the main railway and the highway immediately south of the QR crossing loop of Kamma (between Edmonton and Gordonvale).

Above: *Mulgrave mill's EM Baldwin 0-6-0DH 11 (4413.2.8.72 of 1972) is the only Baldwin locomotive in the Mulgrave fleet involved in cane haulage. The locomotive is shown approaching the neck of the yard at Gordonvale with a rake of loaded bins, late in the afternoon of 30 September 2006. This locomotive was 1 on the Hambledon Mill roster prior to that mill closing in 1992, after which it was transferred to Mulgrave Mill.* ***Left:*** *Having collected a rake of full bins from No.4 Branch, South Johnstone Clyde 0-6-0DH 20 (63-289 of 1963) heads towards Silkwood near Di Mauro siding early in the morning of 29 September 2006, before proceeding to Japoonvale to exchange with a larger locomotive for the run over the range to the mill. This locomotive has been well photographed in a previous life when it operated on the Moreton mill system at Nambour as that mill's* MORETON. ***Below:*** *Bundaberg Sugar Com-Eng 0-6-0DH locomotives* RUSSELL *(A2027 of 1958) and* JOSEPHINE *(A1821 of 1957) are seen here with loaded bins as they crawl across the severely speed-restricted 'silver bridge' over the South Johnstone River, not far from South Johnstone mill, on 29 September 2006. Both of these locomotives were originally part of the Babinda fleet.*

Bundaberg Sugar Clyde 0-6-0DH 17 (55-57 of 1955) runs north from the yard at Babinda Mill before passing under the Bruce Highway overpass and across the QR mainline on 30 September 2006. Several bovines pause from their grazing to watch the locomotive pass while the demolished house in the background remains as a stark reminder of the force unleashed by Cyclone Larry in late March 2006. This locomotive was formerly 12 on the Mourilyan mill roster.

A large number of the new steerable-axle cane bins were noted in service at Mulgrave Mill. Over 400 of these bins, constructed by the Boogan Implement Company, have been acquired since 1997. Each wagon is nearly 6 metres in length with a capacity of 10 tonnes and as such equates to approximately 2.5 of the older style bins.

Babinda

Significant changes were evident with the locomotives operating from this mill. Although many of the older locomotives that were present in the mid-1990s were still in service, each member of the trafficable fleet had received a new cab and had been painted in a new livery of yellow. Whereas Clyde 0-6-0DH locomotives 2 *GOONDI* (55-56 of 1956) and 3 *DARADGEE* (56-90 of 1956) had been the only locomotives operating as a coupled pair a decade earlier, most of the former Babinda locomotives seen on this visit had been modified to operate in multiple-unit mode.

Also present, but operating singly, were a number of locomotives from the former Mourilyan Mill roster. It was apparent that some of these locomotives were exchanged with those from south of the South Johnstone River as visits several days apart revealed that locomotive swaps had taken place. Operations at Babinda were seven days a week due, no doubt, to the closure of the nearby Mourilyan Mill and the diversion of cane from its catchment to Babinda.

It was just north of Babinda, in the Bellenden Ker area, that the effects of Cyclone Larry became obvious. Tarpaulins and blue plastic sheeting were evident on many houses and farm sheds while new foliage was starting to grow back on the forest along the main range behind the cane fields. To the casual observer like myself, it appeared that the sugar cane crops had recovered very well and crushing operations seemed to be 'business as usual'.

Mourilyan

We were aware that Mourilyan Mill had now been officially closed, that decision being made all the easier due to the damage sustained by Cyclone Larry. A brief visit was made to the plant and although much rail traffic was observed on the various lines in close proximity to the mill, the actual mill was a sad sight with the stack bent in half and resting on the damaged superstructure of the main building. Cane from the Mourilyan area was being transported to South Johnstone and Babinda mills for crushing.

South Johnstone

The visit to South Johnstone Mill was a first for us, not having had the opportunity to visit back in the mid-1990s. A number of readers of this magazine had sung the praises of the mill's rail system prior to our departure and I can now understand their reasoning – a very spectacular operation indeed. The mill was operating daily during our visit but one interesting feature was the delivery of cane by road with three bins being conveyed on each road semi-trailer. These bins were of a different design to the rail-based bins. At the time of our visit, Com-Eng 0-6-0DH 19 (AH4688 of 1965) was in use shunting these bins from the road/rail transfer area to the tippler.

Com-Eng 0-6-0DH locomotives *JOSEPHINE* and *RUSSELL*, that had been working at Babinda ten years earlier, were noted operating as a coupled pair, hauling cane from sidings south of the river to the mill. Another surprise was seeing Clyde 0-6-0DH 20 (63-289 of 1963), formerly *MORETON* from Moreton Mill at Nambour. This locomotive was based at Silkwood during our visit and spent much of its time moving cane from the various sidings in the Silkwood area to Japoonvale where, on 29 September 2006, larger locomotives such as EM Baldwin B-B DH 32 *LIVERPOOL* (10385.1.8.82

of 1982) and EIMCO B-B DH 33 *NYLETA* (L253 of 1990) would exchange empty for loaded bins prior to returning over the steep grades back to the mill.

The only sad part of the visit to South Johnstone, was the damage inflicted by Cyclone Larry. Although the mill had been repaired and seemed to be operating daily with little trouble, it was the town and surrounding farms and villages that were still in need of much repair. The damage in this area was much worse than that at Babinda.

Tully

A visit to Tully Mill on the afternoon of 22 September 2006, revealed a large number of the locomotive fleet arriving and departing, while EM Baldwin 0-4-0DH *PRISCILLA* (6.1082.2.2.65 of 1965) was stabled near the depot. The bright red and yellow livery and the general cleanliness of the fleet was quite pronounced.

The number of DH class rebuilds was evident with 4, 5, 6 and 8 all active. Walkers B-B DH 8 (606 of 1969 and rebuilt again by Walkers in 2004) was a relatively new arrival since my last visit. This locomotive was formerly DH24 on the QR roster after which it was acquired by Cook Constructions, although it never saw service with that company.

Macknade

Due to time constraints, little activity was noted at Macknade Mill, although both cane trains and sugar bins were observed on the line east of the mill through Halifax and on to the bulk sugar terminal at Lucinda. Locomotives seen on this line were of the 0-6-0DH type while bogie Baldwins seemed to be used north and west of the mill.

Victoria

As with South Johnstone Mill, this was my first visit to Victoria Mill at Ingham. The limited time available was spent in the vicinity of the mill and on the line to Lucinda where we mostly saw 1960s vintage Clyde 0-6-0DH and EM Baldwin B-B DH locomotives built during the 1970s. All locomotives observed were painted in deep green and yellow and were all very well presented.

Walkers B-B DH *CLEM H MCCOMISKIE* (605 of 1969 and rebuilt by Walkers in 1990 and again by Solari Engineering in 2004) was allocated to working sugar bins from the overhead storage facilities at the mill to the bulk terminal at Lucinda.

Later in the day we were fortunate to receive advice from a very co-operative crew on a cane train that EM Baldwin B-B DH *WALLAMAN* (6400.3.4.76 of 1976) was about to retrieve preserved 0-6-0 Hudswell Clarke steam locomotive *HOMEBUSH* from its static display area at the eastern end of the mill and transfer it to the locomotive depot for testing prior to being steamed for a local festival. After posing for several photographs the crew of *WALLAMAN* gingerly moved the steam engine into the confines of the mill.

Invicta

The morning of 28 September 2006 allowed some time to inspect Invicta Mill at Giru, south of Townsville. In 1996, we had managed to photograph a number of the fleet on the main line south of the mill and on that occasion, the bulk of locomotives observed were rebuilt DH and 73 class. On this visit, a number of older locomotives were noted working cane trains with Com-Eng 0-6-0DH *NORTHCOTE, BARRATTA* and *HAUGHTON* being active.

This mill, as with all others in the Burdekin area, was operating seven days a week at the time of our visit.

Pioneer

A brief visit to this system coincided with a period of no rail activity within close proximity of the mill.

Kalamia

As with Macknade Mill, little time was available this trip and although a visit was made to the mill, no rail activity was taking place at the time. Com-Eng 0-6-0DH *KALAMIA* was noted stored in a derelict state on the western side of the mill near the balloon loop serving the overhead sugar bin.

Inkerman

Our arrival at Inkerman Mill coincided with the afternoon change of shift so within the space of 30 minutes or so, almost all locomotives entered the depot for servicing and then waited for new crews to sign on before heading back to the fields.

Both EM Baldwin B-B DH *IYAH* (6558.1.6.76 of 1976) and Com-Eng 0-6-0DH *KOOLKUNA* (AM4993 of 1965) had received maroon lining (apparently during a recent wet spell-induced break), rather than the more usual green lining. Com-Eng *ALMA* was noted stored without an engine at the southern end of the mill yard. Otherwise, the locomotive fleet appeared to be much as it was in 1996.

CSR Victoria Mill's Walkers B-B DH CLEM H McCOMISKIE *(605 of 1969 and rebuilt by Walkers in 1990), passes down the main street of Halifax on 28 September 2006, with a rake of loaded sugar bins destined for the bulk terminal at Lucinda.*

In summary

After ten years it was encouraging to see activity at the mills that were visited much as before, but a wetter than usual winter had caused a number of crushing days to be lost. Many of the older locomotives had some work carried out, particularly in regard to new and/or modified cabs and the fitting of multiple-unit capability.

One very obvious change since the mid-1990s has been the installation of fencing around many mills and their rail yards with a focus on safety and the desire to restrict access to what are essentially industrial sites. Having said that, all mill employees who were approached for advice on all sorts of matters were extremely helpful.

Although this visit was somewhat limited due to family commitments and sightseeing activities, I hope this brief report gives some insight into cane railway operations in far north Queensland during the 2006 crushing season.

Acknowledgements

I must thank John Browning and a number of members of the Locoshed e-mail group for much of the advice that allowed detailed planning to take place before our departure. Special mention must also be made of the assistance provided by Chris Malone – it was invaluable – thanks Chris, and to Ray Love for assistance with proof-reading this text.

Top: *Tully mill Walkers B-B DH 8 (606 of 1969 and rebuilt in 2004) is the most recent locomotive to enter service for that mill. Originally numbered DH24 when used by Queensland Rail, the locomotive was acquired by Cook Constructions but never saw service with that company. The locomotive is shown passing through Deans loop on the way back to the mill with loaded bins on 22 September 2006.*
Right: *On 28 September 2006, CSR Victoria mill EM Baldwin B-B DH* WALLAMAN *(6400.3.4.76 of 1976) was assigned the unusual task of collecting 0-6-0 steam engine* HOMEBUSH *(Hudswell Clarke 1067 of 1914) from static display prior to it being steam-tested in readiness for the annual Maraka Festival in nearby Ingham. The pair is shown on the eastern side of the mill, passing under the enclosed conveyor belt that transports raw sugar from the crushing plant to the loading bins.*
Below: *The CSR Invicta mill at Giru in the Burdekin River region has a diverse locomotive fleet. Here we see two of the older members of the roster in the form of Com-Eng 0-6-0DH* BARRATTA *(AH4098 of 1965) and* HAUGHTON *(AH3878 of 1964) as they shunt the mill yard on 28 September 2006.*

Industrial Railway NEWS

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NEW SOUTH WALES

BLUESCOPE STEEL LTD, Port Kembla

(see LR 192 p.16)
1435mm gauge
In mid-January a 40-tonne road-rail shunting tractor numbered 22.520 was trialled on shunting duties at the Port Kembla rail system. Painted in Pacific National colours, it was manufactured by Zephir S.p.A. of Modena in Italy. The vehicle appears to be fitted for remote control operation. Its use may reflect plans to eliminate some or all of the steelworks' English Electric diesels.
Neville Conder 1/07 David Rowe 1/07

QUEENSLAND

BUNDABERG SUGAR LTD, Babinda Mill

(see LR 192 p.17)
610mm gauge
For many years, the heart of the Babinda Mill cane railway was a large loop line that encircled Babinda Swamp. In recent years, a short section of this loop between the QR and the Bruce Highway at Miriwinni has been disused. However, it was observed under refurbishment on 31 July 2006. It is believed that it had been a casualty of a property dispute as a result of the track having been built outside the rail easement, so presumably the matter had now been resolved.
Brian Webber 12/06; Editor

BUNDABERG SUGAR LTD, Bundaberg Mills

(see LR 193 p.18)
610mm gauge
By the end of February, about half of the new Strathdees line linking **Millaquin Mill** with the Burnett River ferry terminal opposite Fairymead had been constructed, commencing from the Strathdees end. Access to this end of the line is via the old Qunaba Mill site. The bridge over Rubyanna Creek was yet to be built. There had been some difficulties in coming to agreement with one landowner about the line's route, but this matter has now been resolved.
Com-Eng 0-6-0DH *SHARON* (A1935 of 1959) has been transferred across the river from **Bingera Mill** to assist with construction duties and was noted with ballast wagons and the Plasser KMX-12T tamping machine (390 of 1994) on the newly-constructed line in late February.
Alterations to the yard tracks at Millaquin are under way to accommodate the new line, which will enter the yard close to Alexandra Street.
Com-Eng 0-6-0DH *BURNETT* (AH2967 of 1963) has returned to Millaquin Mill from its late 2006 loan period at Bingera Mill, and was noted at the Millaquin locoshed in late February with three ballast wagons.
It was reported that the road/rail transloader situated towards the northern end of the mill yard at Millaquin may have to be moved as it apparently currently occupies Council land that is needed for future road works.
Further upgrading to the Fairymead–Bingera link line is proceeding including relaying on concrete sleepers a further section of track on Witts Road, from the junction with Rosedale Road. Government-funded work will ease downhill grades for loaded trains on the steeper sections of this line, with the limits on Pitt's and Cellars Hill planned to be increased from 40 bins to 60.
Bingera Mill's EM Baldwin B-B DH *DELAN* (5800.3 7.75 of 1975) is to receive a new Caterpillar C16 6-cylinder engine similar to that already fitted to *OAKWOOD* (5800.1 5.75 of 1975).
Lincoln Driver 1/07; 2/07

The ex-Newcastle Steelworks Goninan Bo-Bo DE 58 (058 of 1982) at Heggies Bulkhaul in Port Kembla is rarely seen moving, but Neville Conder caught it in action on 16 January 2007. *Photo: Neville Conder*

Top: *A busy scene at Bluescope Steel's Cringila yard on 18 January 2007 with GEC Australia Bo-Bo DE locomotives D40 (A.241 of 1972) and D44 (A.272 of 1975) in attendance. With Pacific National taking over responsibility for haulage on site, the future of these units could be in doubt. Photo: Brad Peadon*
Centre: *The shape of possible future haulage at the Port Kembla steelworks may be represented by this 40-tonne Zephir road-rail unit that was on trial on 16 January 2007. Photo: Neville Conder*
Above: *On a wet 19 February, Mossman Mill's EM Baldwin B-B DH* DAINTREE *(7303.1 7.77 of 1977) was loaded at Victoria Mill for its return to the far north. Also in attendance are (from left) Clyde brake wagon BV7, EM Baldwin B-B DH* ADELAIDE *(7070.2 4.77 of 1977), Walkers B-B DH* JOURAMA *(680 of 972 rebuilt Bundaberg Foundry, 1996), Solari brake wagon BV10 (without bodies), and behind it Com-Eng brake wagon BV2 and Baldwin brake wagon BV3. Photo: Chris Hart*

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CSR SUGAR (HERBERT) PTY LTD, Herbert River Mills

(see LR 193 p.18)

610mm gauge

The remaining two locomotives on loan to **Victoria Mill** in 2006 have returned home. Plane Creek Mill's Clyde 0-6-0DH D1 (56-101 of 1956) returned south to Sarina, reportedly on 13 February. Mossman Mill's EM Baldwin B-B DH *DAINTREE* (7303.1 7.77 of 1977) was loaded for its return north on 19 February.

Two new 32-tonne bogie brake wagons are to be built for use at Victoria Mill this season, using ex-QR HWAB wagons. This will then allow four of the smaller six-wheel brake wagons to have their centre axles removed and to be paired together. The chassis of Victoria Mill's EM Baldwin 4wDH "*HAMBLEDON*" (8002.1 8.78 of 1978) has been fitted with a Klam electro-magnetic retarder and alternator for service as a prototype new type of brake wagon.

Current indications of the changes for 2007 are as follows:

Brake wagon	From	To
BV1 (Com-Eng) + BV2 (Com Eng)	*CLEM H McCOMISKIE TOWNSVILLE*	*VICTORIA*
BV3 (EM Baldwin) + *HAMBLEDON*	*ADELAIDE* -	*CLEM H McCOMISKIE*
BV8 (EM Baldwin) + BV9 (EM Baldwin)	*MAITLAND GOWRIE*	*HERBERT*
BV10 (Solari)	*HERBERT*	*MAITLAND*
BV11 (Solari)	*VICTORIA*	*TOWNSVILLE*
BV12 (Solari)	*JOURAMA*	*GOWRIE*
BV13 (Solari)	*CAIRNS*	*ADELAIDE*
new	-	*JOURAMA*
new	-	*CAIRNS*

It is anticipated that initially the new electro-magnetic brake wagon will be trialled with Clyde brakewagon number 5, paired with EM Baldwin B-B DH *BRISBANE* (5423.1 9.74). This locomotive is reportedly to be fitted with a new engine and transmission in Brisbane by Caterpillar rather than the reconditioned unit that was forecast earlier. Walkers B-B DH *HERBERT II* (612 of 1969 rebuilt Walkers 1993) was being prepared to receive a new engine in mid-February.

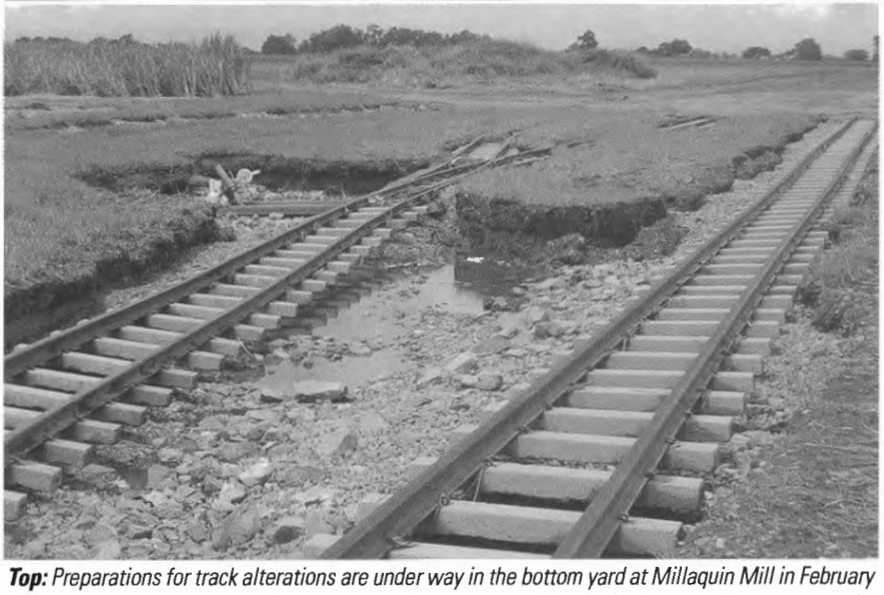
The Solari bogie brakewagon at **Macknade Mill**, number 3, had a small Robin diesel fitted during the 2006 season, following several failures of larger VM engines. The new engine has been very successful in service.

Macknade Mill's Western line was cut back to its second last siding during the 2006 season. The last section had seen little use with prawn farming having displaced cane in the area concerned.

Heavy wet season rains and flooding affected the Herbert district in January and February, with the Herbert River bridge at Macknade being submerged several times and track washaways being experienced in various locations.

Chris Hart 12/06, 1/07, 2/07; Brett Geraghty 12/06, 1/07, 2/07

Top: *Marian Mill's Eimco B-B DH 20* BOONGANNA *(L257 of 1990) heads empties towards Victoria Plains on 4 August 2006 while Clyde 0-6-0DH twins 56-104 of 1956 and* HABANA *(60-215 of 1960) wait to head back to the mill with fulls. Photo: Brian Webber.* ***Right:*** *A number of Victoria Mill's small brake wagons are being modified to run in pairs in the 2007 season. Here on 28 February 2007 two Baldwin brake wagons are shown in the locoshed with the centre axles removed. On the right is brake wagon BV8 and on the left is BV3. In a move likely to confound future historians, BV3 has been fitted with the control box from Com-Eng brake wagon BV2. Photo Chris Hart.* ***Below:*** *Plane Creek Mill's Walkers B-B DH 3* KOUMALA *(651 of 1970 rebuilt Bundaberg Foundry 1995) skirts the Sarina golf course as it heads a southbound rake of empties on 25 September 2006. Photo: Matt Green*



Top: *Preparations for track alterations are under way in the bottom yard at Millaquin Mill in February 2007 in readiness for the new line to Strathdee's. The transloader in the background may have to be relocated to meet local Council requirements. Photo: Lincoln Driver.* ***Centre:*** *Macknade Mill's two Clyde Model HG-3R 0-6-0DH locomotives on shed on 29 December 2007. With its new engine, the appearance of 11 (65-383 of 1965) now contrasts with that of 12 (65-434 of 1965) behind it. 11 has lost its large battery boxes and sports a horizontally-mounted air cleaner and straight stack.Photo: Chris Hart.* ***Above:*** *Wet season damage to the cane railways of north Queensland is exemplified by this washaway at Barbargallo's on the Victoria Mill network on 17 February 2007. Photo: Brett Geraghty*

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HAUGHTON SUGAR CO PTY LTD, Invicta Mill, Giru

(see LR 193 p.21)

610mm gauge

Wet season flooding of the Haughton River in February saw several locomotives and brake wagons standing in swift-flowing water near the top of the mill yard.

Matt Green via Carl Millington 2/07

CSR SUGAR (KALAMIA) PTY LTD, Kalamia Mill

(see LR 192 p.18)

610mm gauge

600 new six-tonne bins are to be manufactured at the mill during the current slack season, at a cost of around $6000 each. A team of 15 workers was expected to be able to assemble up to 8 bins per day. The mill already has 500 of the 6-tonne bins and a further 550 will be constructed during the 2008 slack season. They will all be fitted with automatic couplings. The new bins are to replace old 5-tonne bins, some of which are up to 40 years old and are still fitted with hook and ring couplers.

In addition, upgrades will be carried out to 14 Kalamia cane sidings this slack.

Interesting visitors noted at Kalamia Mill on 25 January were Invicta Mill's Walkers B-B DH *GIRU* (593 of 1968, rebuilt Tulk Goninan 1994), with brake wagon, and Inkerman Mill's EM Baldwin B-B DH *BOJACK* (7280.1 9.77 of 1977). *BOJACK* had been at Invicta at the end of the 2006 season and with the annual removal of the Haughton River bridge span at Giru both locos travelled over the Pioneer Mill dual gauge section for stabling at Kalamia over the Christmas break. It is thought that they will later be used out on the Invicta Mill line for slack season RSU training.

Ayr Advocate 5/1/07 via Brett Geraghty; J Seldon 1/07; Jason Lee 1/07

SOUTH AUSTRALIA

ONESTEEL LTD, Whyalla

(see LR 192 p.19)

1067mm & 1435mm gauge

Flooding in late January seriously damaged the 3ft 6ins gauge rail line connecting the Whyalla steelworks with the iron ore mine in the Middleback Ranges. This resulted in some use of road transport for ore haulage while repairs were carried out.

ABC News Online 22/1/07 via Barry Blair; OneSteel Media Statement 22/1/07

WESTERN AUSTRALIA

BHP BILLITON IRON ORE PTY LTD

(see LR 193 p.21)

1435mm gauge

On 12 January, BHP Billiton lodged its appeal against a Federal Court ruling that would allow

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access to its railway by third parties such as the Fortescue Mineral Group, which wishes to have access to develop its Mindy Mindy ore deposit about 60km from Newman.
The West Australian 13/1/07; *Herald-Sun* 16/1/07 via Barry Blair

THE PILBARA INFRASTRUCTURE PTY LTD
(see LR 193 p.21)
1435mm gauge
A ceremony was held on 8 February to mark the start of construction of the Pilbara's "first open-access railway". The line is the 260km line from the planned Fortescue Mineral Group's mines in the Chichester Ranges to Port Hedland. FMG has already received enquiries from competitors about access to its new railway and port facilities which are scheduled to be in use in 2008.
Australian Rail Mining Services, a division of South Spur Rail Services, has advertised for staff, including locomotive drivers, to work on the construction of the new railway line.
The two Alco Co-Co DE locomotives purchased from Pilbara Rail, as reported in LR 193, are being refurbished by GTSA Engineering in Perth for use on construction trains. Two additional locomotives may also be supplied by GTSA using its stock of dismantled parts from ex BHP Billiton locomotives. For use on ore haulage, fifteen new Model C44-9W Co-Co DE locomotives are on order from General Electric.
The West Australian 13/1/07; *Herald-Sun* 17/1/07 via Barry Blair; Richard Montgomery 1/07; *MotivePOWER* No.50

PILBARA RAIL
(see LR 193 p.21)
1435mm gauge
A serious head-on collision took place at Maitland Siding near Pannawonnica on the Robe iron ore railway on 6 January. A loaded train from the Mesa J mine, hauling a load of 21,000 tonnes, ran into a stationary empty train waiting in the loop at a speed of 20 km/h. It appears likely that the accident was caused by a points malfunction that unexpectedly diverted the loaded train onto the wrong line. There were four locomotives at the head of each train. The two locomotives at the head of the loaded train seem to have suffered the most damage. General Electric Co-Co DE 9406 (54156 of 2003), in the lead, ended up going down an embankment and coming to rest on its side, while General Electric Co-Co DE 7079 (47758 of 1995) behind it was left hanging over the embankment at right angles to the track. The other locomotives remained upright.
The line was reopened for traffic a week after the accident.
Ten new Model ES44DCi Co-Co-DE locomotives have been ordered from General Electric in the USA.
Richard Montgomery 1/07; Leon Oberg 1/07; *MotivePOWER* No.50

LOCOMOTIVE, ROLLING STOCK & EQUIPMENT MANUFACTURERS

GTSA ENGINEERING, Maddington, WA
This company is refurbishing two ex Robe locomotives for The Pilbara Infrastructure Pty Ltd for use on construction duties on the new Fortescue iron ore line in the Pilbara. It also owns a quantity of dismantled locomotives that have been obtained from the Pilbara since 1997, and it is suggested that two further units may be produced from this stock, specifically ex Hamersley Iron AE Goodwin Co-Co DE locomotives 3007 (G-6011-02 of 1968, rebuilt Com-Eng) and 3013 (G-6040-01 of 1970, rebuilt Com-Eng).
MotivePOWER No.50

Book Review

Sydney's Forgotten Quarry Railways

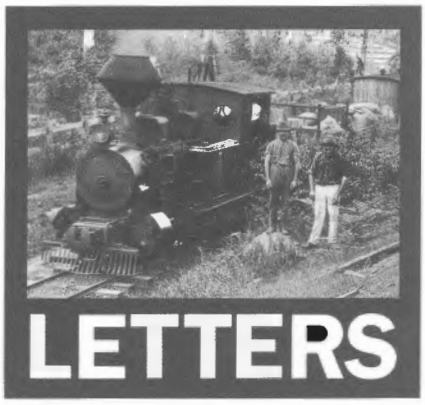
Prospect – Widemere – Emu Plains – Yarramundi – Thornleigh – St Leonards

by John Oakes

175mm x 247mm, 80 pages on art paper with colour card cover. 70 black & white photos, and six maps/diagrams. Published 2006 by Australian Railway Historical Society New South Wales Division, 67 Renwick Street, REDFERN 2016. Recommended retail price $15.

The economic surge of the mid-1920s brought a huge increase in the demand for road metal and for sand and gravel for concrete making, and in Sydney this led to the expansion of quarrying at Prospect Hill and of alluvial exploitation at Emu Plains and Yarramundi, using standard gauge steam locomotives on tramways connected to the mainline railway. At Prospect and Yarramundi, 3ft 6ins gauge locomotive-worked lines also existed although steam was only used at Prospect. These lines were covered in Bruce Macdonald's *Blue Metal and Riverstones* of 1956, while in 1985 the late Craig Wilson contributed a special edition of *Light Railways* on the Nepean Sand & Gravel operations at Yarramundi.
They now form the major focus of John Oakes' latest offering in the Sydney's Forgotten Railways series, with the inclusion of a ballast quarry at Thornleigh and a brickworks at St Leonards, each served by a standard gauge private line connecting with NSWGR, as well as the early narrow gauge Fullagar's Bank horse line at Prospect.
The booklet contains an interesting variety of photographs and clear, well-drawn maps. The text provides background information on each line, details of the locomotives used, and some data on rail operations, with a preponderance of material on safe working practices at the interface between private and government railways.
It appears that much of the material is a rehash of previously published information, and I noted a few inconsistencies with possibly more recent research. For example, the identification of the narrow gauge Kitson used at Prospect is at odds with that provided by Ken McCarthy in his *Illawarra Gazetteer*, while *POSSUM* was a product of Neilson of Glasgow, not Robert Stephenson, a fact recently revealed in LRRSA's *Furnace, Fire & Forge*. In addition, the late Craig Wilson indicated (privately at least) that he was not convinced that more than one Vulcan worked at Prospect. The Thornleigh account is padded out by a self-guided tour of the line's remains, with eight half-page modern photographs. There is no photograph of *WESTWARD HO*, the locomotive that operated the line, even though I understand that at least one does exist. The St Leonard's material contains much fairly confusing detail regarding the multiple brickworks operators in the district and other information that has little connection with the tramway, and again no period photographs.
The colour cover photographs of operations on the special "last day" at Emu Plains on 1 April 1967 left me wishing that some colour pages had been included within to do justice to the many other shots from that day that are reproduced in black and white only. However, the workmanlike book was produced under a tight budget to allow it to be accessible to a wide readership, a successful formula judging by the success of previous volumes.
The author has succeeded in providing the reader with an understanding of these long-gone operations and provides information that would enable anyone interested to retrace the routes of the lines through now scarcely-recognisable suburban surroundings. The book is recommended as value for money and an interesting read.

John Browning



LETTERS

Dear Sir,

"South Maitland Railway Heritage" (LR 193)

The Research item in LR 193: "South Maitland Railway Heritage NSW" contains a minor error. Some may think it hardly worth correction but after all it is "historical research" so let's get it right.

Coal and Allied Industries Limited (not "Pty Ltd") was not formed until 1960, so they had nothing to do with the original footbridge which was built by SMR, probably when the station was upgraded in 1928.

As stated, the 1954 extension over the Hebburn sidings was (presumably) constructed by the SMR but was financed by a Joint Coal Board Mining Community Grant to Cessnock Council.

The sad, vandalised signal box is, of course, not the original, which was on the passenger platform. I don't have a date for its construction, but it was most likely around 1961, when the station was de-manned.

John Shoebridge
Dora Creek, NSW

Dear Sir,

The mysterious *Bunyip* (LR 181)

The valve gear fitted to this unidentified locomotive is not Allan but Stephenson. In Allan gear there are suspension links to both the rear of the valve rod and the bottom of the slotted expansion link. The top of each suspension link is connected to either end of the rocking lever. Therefore the gear is not attached to the motion bracket which merely supports the slide bar(s). In the Stephenson gear there is only one suspension link that is connected to the bottom of the expansion link. On *Bunyip* the end of the valve rod is supported in a guide box on the front of the motion bracket. The guide box with its four studs is the same as found on Krauss locomotives. Other contemporary Krauss features are the small dome and sandbox, the latter with large radius curves. The regulator is also similar, as is the way the regulator rod is taken through the sand dome.

I wonder if the locomotive was taken apart when it was rebuilt in 1994-1996, and whether any clues to its identity were discovered at that time.

Peter Witts
Cheltenham, England

Dear Sir,

Portable Railway in the 1850s

A portable railway that was reportedly peculiarly adapted for use in Australia was commented on in the *Sydney Morning Herald* of Tuesday, 1 August 1854. It may be of interest to your readers :

"PORTABLE RAILWAY. A new and ingenious plan of portable railway has been patented by Mr W. Crosskill, especially adapted for the use of common road carriages, with common wheels, as well as for railway carriages; which, however, is only advocated for situations where the expense and time necessary to establish a permanent line prevents it being carried out. Mr. Josiah Parkes, the eminent engineer of Great College-street, has inspected and reported on a line of 1,000 yards now laid down at Beverley, and is designed for service at Melbourne, and for experiments for the information of Mrs. Chisholm and others, previous to her taking out a portion to Australia. In this report, Mr. Parkes states that the railway is well designed for the object intended ; it is simple and light, but quite strong enough for loads from 2 to 4 tons, drawn by horses; it is readily put together, laid down at a small cost, and well adapted for practical use. The line at Beverley is purposely laid down on a very irregular piece of ground presenting very sharp curves and steep inclines; yet with some heavy experiments and severe tests, it stood them most successfully. The contrivance is peculiarly adopted to Australia, as the merchants and carriers could use their own carriages, and thus diminish outlay. Mr. Crosskill has also introduced a double line, for more important purposes, by which army carriages, parks of artillery, &c., might be transported. The cost is from £1,100 to £1,400 per mile."

Two years later in an article concerning Crosskill's "Portable Colonial and Military Railway" (*Sydney Morning Herald*, 30 September 1856, p.8), it was stated that: *"The railway is not primarily adapted for steam power, although on level roads engines of eight or ten horse-power might work it at modest speed."*

Perhaps a Victorian reader would care to enlighten us as to what the Australian colonists made of Mr Crosskill's portable railway in 1854?

Name and address withheld

Dear Sir,

Sabah State Railway (LR 189, LR 191) Update at February 2007

A visit to Kota Kinabulu (KK) in February enabled a ride on the local mixed from Tenom to Beaufort (the only section of the line currently operational) and a look at the section from KK to Beaufort where reconstruction work is underway, as noted by Kevin Waid (Letters, LR 191).

The metre gauge Sabah State Railway was developed in the late 1890s to facilitate transport and commerce along the swampy coastline south of the capital Jesselton (now Kota Kinabulu) to Beaufort a distance of 85 km. Two branches were also built from Beaufort, firstly to Weston on the coast at the mouth of the Padas River, and secondly, up the Padas River to the inland town of Melalap. The railway survived WWII and was largely rescued and rebuilt by Australian Army sappers in 1945, as described in Philip Dandy's article in LR 189.

Today, 134km of the railway still exists, providing an essential service to the local population from KK to Tenom; the Weston branch and the Tenom-Melelap section having been closed. In latter years, the railway has become closely linked to tourism and provides the only access to the popular white water rafting on the Padas River. The vintage steam train services operated as a joint venture between the Sutera Harbour Resort and the Sabah State Railway are currently suspended until the 33km between Kota Kinabulu and Papar is restored, probably around the end of 2007. In the meantime, the carriages are

Malcolm Moore MM33 and children's train in the shed at Tanjung Aru. The small open carriages are brightly painted with wildlife and plants of Sabah including the rafflesia (largest flower in the world) seen behind the loco. *Photo: Malcolm Dow*

being overhauled at Tanjung Aru (Kota Kinabulu) station and the two working steam locomotives (6-015 and 6-016) resplendent in green livery and silver boiler bands, are safely housed under cover in the workshops.

Total reconstruction of the permanent way, bridges and most station buildings between Kota Kinabulu and Beaufort (except for Beaufort station) is well under way under two separate contracts. Passenger services on this section are being maintained by buses which run to the train timetable. Technical supervision is being provided by the Malaysian Railways (KTM). It is understood that the former 60lb rail is to be upgraded to 80lb and that train speeds up to 90 kph will be possible. This should enable faster running times although there will probably be a need for new rolling stock and locomotives as the existing stock is very old and run down. The newest passenger carriages and diesel locomotives date from the mid 1970s.

The railway owns a large number of diesel locomotives from various Japanese manufacturers. Most are unserviceable and there is a dire shortage of spare parts. In addition there is a very interesting collection of railcars, ranging from early Wickham diesel multiple units with matching trailers, newer rail cars seating around 20, through smaller 8 to 12 seater Wickhams. A large streamlined cream coloured rail car was seen in the sheds at Tanjung Aru but enquiries failed to determine its status. It may have been the Indian 'Rail Bus' which was deemed to be too unstable for the light track. Also noted were a number of one or two seat motorised trolleys, probably home made. In the shed at Tanjung Aru were a small Hunslet diesel shunter (still in use) and a Malcolm Moore 4wPM nicely painted up with a matching 'children's train' used on festive occasions. The Malcolm Moore carries the number MM33. It is not clear whether this is the same Malcolm Moore loco which was previously on static display (LR 186, p13).

Train services between Beaufort and Tenom are running to the normal schedule but even on this section, all station buildings are being renewed and improved, clearly in expectation of increased tourist traffic and rafting activities. The usual local train service consists of a bogie flat car, a luggage van and three carriages, hauled by a diesel shunter type loco. The track is in very good condition for the most part. The line is benched into the mountainside above the river and small landslides and erosion of the river bank are common occurrences which sometimes affect timetabling and require ongoing maintenance. Apart from a 20m tunnel through a rocky spur some 3 km from Tenom, there are no major engineering features and no large bridges on this section. As there is no road through the Padas River valley the train provides a lifeline to homesteaders living on the river and makes many unscheduled line side stops to set people down and pick up cargo and market produce. A first class railcar service also runs once or twice a day on a faster schedule than the local train.

Incidentally, I noticed that there was a small error in the letter in LR 191 wherein the length of the line is given as 268 km. In fact it is 134 km. A factor of two has crept in somehow. Further information, maps and photos of the line can be found at http://homepage.ntlworld.com/john.raby1/borneo.html and news of the resumption of the vintage train services will be found at http://www.northborneorailway.com.my/nbr/

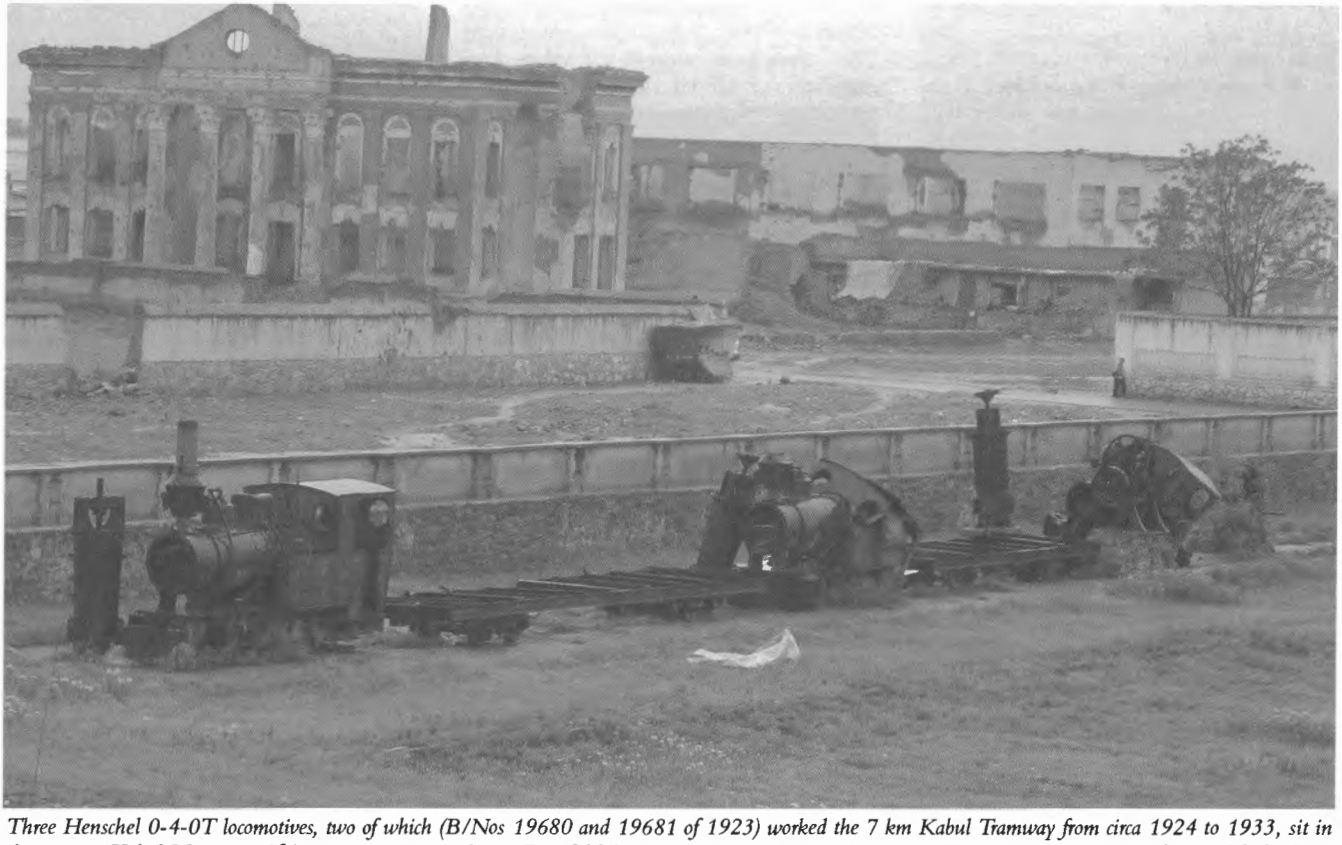
Kabul Tramway, Afghanistan

The accompanying photo taken on a wet and gloomy Anzac Day in 2005 shows the remains of three Henschel 0-4-0T locomotives in the grounds of the Kabul Museum. Two of the locos (B/N 19680 and 19681 of 1923) worked the 7 km Kabul Tramway circa 1924 to 1933 which ran along the road from the old city to the model city established by King Amanulla at Darulaman. The origin of the third loco is not known.

The two tramway engines were photographed in the original brick engine shed in 1975 (refer http://www.ajg41.clara.co.uk/kabul.html) but there is no trace of the building today, or indeed any signs of tramway formation, thanks to extensive road works and recent commercial development along the route.

The condition of the locos and two carriage underframes is much deteriorated from that seen in the 1977 photos. Perhaps it is a miracle that they still exist at all considering Afghanistan has suffered 25 years of internal strife and civil war since then and the museum itself was sacked and destroyed during the Taliban era. Although there are rumoured plans to restore one of the locos to working order, this seems unlikely to occur due to the museum's limited budget and continuing unsettled conditions in the county.
Meanwhile, modern Kabul, overcrowded with 3 million people and choked by cars to the point of gridlock, cries out for restoration of the former extensive trolley bus system which was a victim of the civil war. The trolley bus depot and remains of up to 50 vehicles still survive, as do some poles and bits of wiring along the routes that were once served.

Malcolm Dow
Glen Iris, Vic



Three Henschel 0-4-0T locomotives, two of which (B/Nos 19680 and 19681 of 1923) worked the 7 km Kabul Tramway from circa 1924 to 1933, sit in the open at Kabul Museum, Afghanistan, on a wet Anzac Day 2005. *Photo: Malcolm Dow*

Dear Sir

Fragile Idyll : Fiji October 2006 (LR 192)

I wish to correct the identification given in this report for Clyde Model DHI-71 locomotives Lautoka 20 and ex-Labasa 16.

A study of photographs shows clearly that Lautoka 20 is ex-Isis Mill 8 (64-385 of 1964) while Labasa 16 was ex-Isis Mill 7 (61-220 of 1961).

Isis Mill 7 was coupled to work in multiple with Isis 8 in 1979. As such, number 7 had its cab removed the following year. This was replaced in Fiji with a mansard roofed cab as carried by ex-Labasa 16 (and Rarawai 28, ex Isis 3). Other points of difference include:

- Isis 8 had sand box brackets fitted at the front end which can be seen on Lautoka 20, but Isis 7 never had these.
- Isis 8 was fitted with new cab steps with steel backing at Isis as can be seen on Lautoka 20, while Isis 7 retained its original Clyde steps.
- Isis 8 had a raised cab for soundproofing, as does Lautoka 20. Isis 7 never had a raised cab.
- Isis 8 had an anchoring point for a safety chain for multiple-unit operation above the coupler at the cab end, which can be seen on Lautoka 20. Isis 7 had its multiple unit attachment at the opposite end.

Brian Bouchardt
Horton via Childers, Qld

Dear Sir,

Penryhn Castle Industrial Railway Museum (LR 192)

In Issue 192, on page 30, mention is made of a visity to the Penrhyn Castle Industrial Railway Museum. Having spent a little time in that area, I can only say that you have visited one of the most interesting portions of the UK. Not only is there the Welsh Highland Railway, and those at Llanberis, but there is a wealth of dismantled heavy and light rail sites in the area. The light railway remains from the Llanberis area quarries to the Menai Straits (Y Felinheli) loading area with its incline to the port, as well as the old port at Penrhyn (where a couple of old buildings remain) are of great fascination.

However, for the sake of historical accuracy, I draw your attention to the spelling of 'Dinorwig' with a 'g' rather than an 'e' or 'se'. According to the book *Delving in Dinorwig* by Douglas C Carrington, the name comes from Llys Dinorwig (Dinorwig Court) an ancient site some two miles (3.2 km) north-west of Dinorwig Village. Having said that, there is a map by R Lloyd Ellis dated 1836 that shows the spelling as 'Dinorwic', with a 'c', perhaps an old rendering of 'g'.

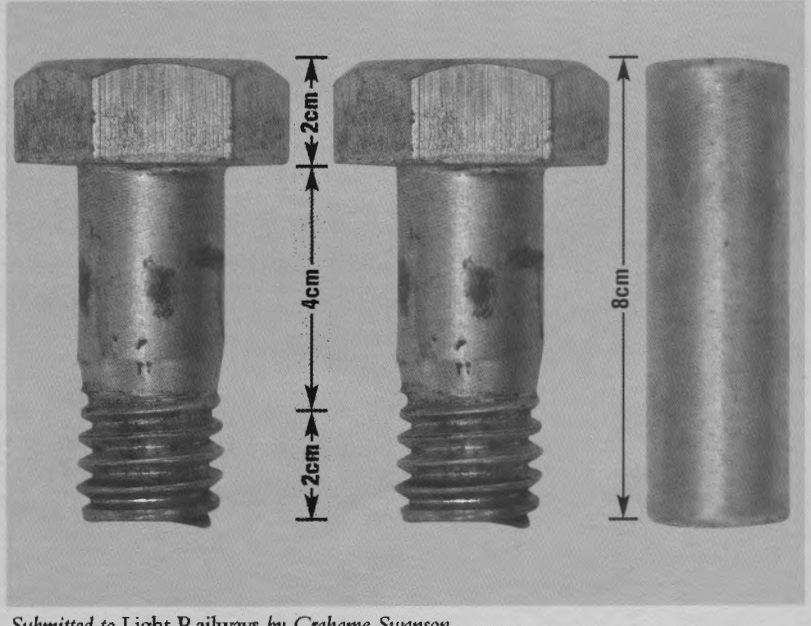
Whatever the spelling, it's a great place to visit and explore for anyone interested in light railways. Incidentally, I have visited some of the areas after a coating of snow, and this really shows up the old formations, especially in some of the mountainous areas and small villages. I can recommend it - but take warm clothes!

Ken Littlefair
Cremorne, NSW

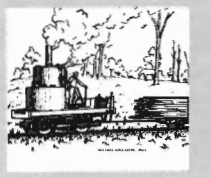
Brain Teaser

Many of our readers are involved in the practical 'hands on' aspects of restoring light railway equipment, and for those people (and anyone else who thinks they may be able to solve this) we present the following puzzle:

Below, we have two steel bolts plus a length of steel rod of the same diameter and overall length. The object of the exercise is to create two bolts, each 12 centimetres long overall, and to achieve this by making no more than two cuts and three welds.



Submitted to Light Railways *by Grahame Swanson*



LRRSA NEWS

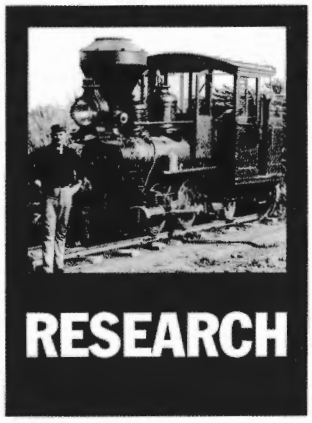
MEETINGS

ADELAIDE: "Plans for 2007 and bring a favourite videotape."
There will be a discussion regarding plans for 2007, and members are invited to bring along a favourite videotape or DVD.
Location: 150 First Avenue, Royston Park.
Date: Thursday 29 March at 7.45pm.
Contact Arnold Lockyer (08) 8296 9488

BRISBANE: "Gordon Anderson's slides"
Gordon Anderson will show slides from his collection.
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 13 April at 7.30 pm. Entry from 7 pm.

MELBOURNE: "South Gippsland Tramways"
Mike McCarthy will be presenting an item on South Gippsland tramways, including Cape Paterson, the Wonthaggi Brickworks Tramway, O'Keefe's Tramway at Port Franklin, and various early timber tramways.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday, 12 April 2007 at 8.00 pm

SYDNEY: "Ida Bay Railway and Hartley Vale shaleworks"
Ian McNeil will talk first, on his recent visit to Ida Bay Railway in Tasmania, followed by Mark Langdon, who will share some of the information he has gathered while researching the Hartley Vale shaleworks.
Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).
Date: Wednesday **18 April** at 7.30pm.
Please note that, due to a conflict with Anzac Day, the April meeting will be held one week earlier than normal.



RESEARCH

Tall Timber & Tramlines NSW

One of the most successful of the many LRRSA publications was *Tall Timber & Tramlines: An introduction to Victoria's timber tramway era*, published in 1984 and affectionately known as 'TT&T'. It provided an introduction to Victoria's forest industries by region and the tramlines that served the many sawmills by forest region, with a selection of good quality photographs. TT&T served to introduce many people to the fascinating history of the tramline era.

The LRRSA has now embarked on a project to prepare similar books for each State (and a new book for Victoria) to a standard format, commencing with Queensland, which will be published in 2007. Each book in the TT&T series will be A4 format and between 64 and 96 pages. The emphasis will be on good quality photographs and maps, with a general text, plus bibliography for further reading. I have taken on the role of coordinating a group of LRRSA members interested in forest history to prepare the TT&T version for New South Wales. If any reader can assist with this project, can they please get in touch with me by email: rfmckillop@bigpond.com or via *Light Railways* at PO Box 674, St Ives NSW 2075. *Bob McKillop*

Powelltown Shay locomotive

Lima Shay locomotives B/No. 2575 and 2576 were both built in 1912 for the Lloyd Copper Company, at Burraga, New South Wales. They both ended their days at the Powelltown timber mill in Victoria. The boiler of No. 2575 was used to power a sawmill at Carpolac in western Victoria and can be seen today in the former station yard at that location. The frames, boiler, engine unit and water tank from No. 2576 were taken to Omeo in eastern Victoria to power a sawmill.

In the early 1960s the now discarded remains of No. 2576 were collected by an enthusiast and stored on a property belonging to another man of steam, where they remained for many years before being relocated to a property in the eastern suburbs of Melbourne.

Whilst at Omeo the engine unit had operated in a horizontal position away from the boiler. Only after some time was it realised that the frame on which the engine unit was mounted, was in fact one end of the locomotive frames. This was identified by some of the castings to which the truss rods were attached and the plates to which the buffer beam was bolted.

Bill Hanks recently had the opportunity to view the remains of No. 2576 and interview the current owners. Having been preserved to prevent further deterioration, some efforts have been made towards restoration of the boiler and refurbishment and reassembling the engine unit. It is hoped one day for the boiler to be steamed and to again power the engine unit in a stationary display. The water tank, whilst complete, is likely only to be suitable as a pattern from which to construct a new one.

A point of some conjecture has been the location of the bogies that were not taken away from Powelltown with the rest of the locomotive. It has been suggested that they may be buried at Powelltown along with other discarded sawmilling equipment. Whilst full restoration of the locomotive is possible, it will require substantial resources to complete.

Another interesting item seen during this visit was the smokestack from the ill-fated Harman locomotive that was purchased by the Forest Commission of Victoria for use on the Tyers Valley Tramway near Erica. This item was pulled from the river at Tyers Junction some forty years ago. There have been suggestions that this locomotive was removed intact from Tyers Junction after closure of the tramway in 1950 for possible, but unlikely use elsewhere. The presence today of the smokestack and where it was found confirms that the locomotive was in fact scrapped on site.

WL ('Bill') Hanks

Captains Flat Mines Tramway, NSW

With the current resources boom unabated, one of Australia's historic mines being proposed for a new life is at Captains Flat to the east of Canberra. *The Australian* newspaper of 15 January 2007 reported that the old town is again reverberating to the sound of drilling operations as Ironbark Gold seeks to establish the reserves of base metals that remain in the area. The field was first worked for gold from 1882, but these mines were later worked for copper, as well as some silver and lead.

Lake George Mines established a smelter and 2ft gauge tramway, which was worked by Krauss 0-6-0T 3444 of 1896. Bruce Macdonald and Jim Longworth describe this operation in their article in the *ARHS Bulletin* No.683 of September 1994.

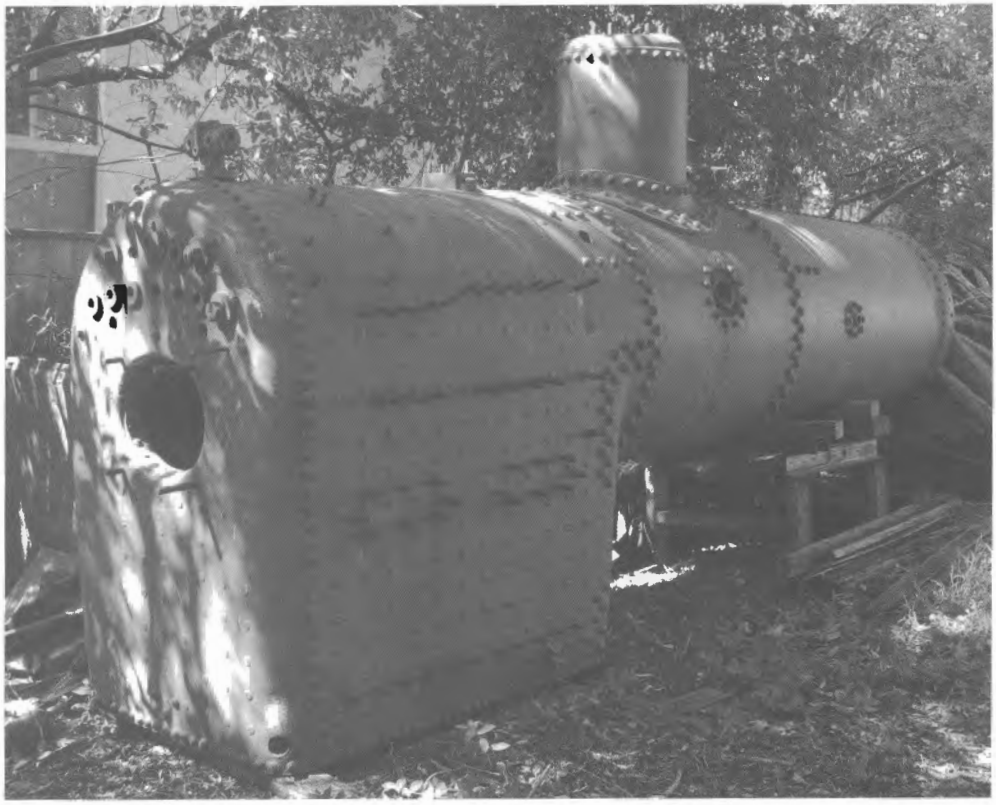
Mining for base metals recommenced in the 1920s and the NSW Government Railways opened a standard gauge branch line to the town in 1936. Captains Flat was a major producer of lead and zinc during the war years and continued operations until 1962, with an extensive 1'7¾" (502mm) gauge system of underground tramways powered by battery locomotives..

Item supplied by Barry Blair.

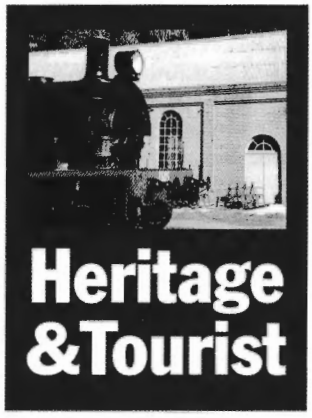
Mining Industrial Railways

Contributors to the LRRSA Yahoo Group have also provided information on several useful online sources of information and bibliographies on industrial railways associated with Australian mining industries. Dr Ian Stuart notes that researchers interested in the history of the Greta coal measures should check the following Newcastle Regional Museum site:

http://amol.org.au/newcastle/greta/frames.html



The boiler of Lima Shay locomotive 2576 of 1912, together with the engine unit and many other parts, is currently stored on a property in the eastern suburbs of Melbourne. *Photo: Bill Hanks*



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.
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@optusnet.com.au

NEWS

Queensland

BUDERIM PALMWOODS HERITAGE TRAMWAY Inc.
762mm gauge
As reported in LR 187 (p. 27), the former Buderim-Palmwoods Tramway 0-6-2T locomotive (Krauss 6854 of 1914) is being restored for display in a small park in the centre of Buderim near the original station. BPHTI has formed a Krauss Restoration Group with independent funding to undertake the restoration. Over $10,000 has been raised from raffles, donations, and a government grant. Volunteers are performing most of the work with tasks requiring specialist equipment being sub-contracted locally. The volunteers constructed a new cab and bunker and these were fitted in December 2006. The coupling rods and new crankpins were machined in Landsborough between May and August 2006 and the crankpins were fitted in October, as well as brake hangers, brake blocks and pull rods. The restoration work to a standard suitable for static exhibition is scheduled for completion by mid-2007. The BPHTI is keen to make the final product as realistic as possible (time and money permitting) and is seeking information and images of the locomotive during its working life at Buderim, particularly regarding the steam dome and cab interior. If any reader can assist please contact the project coordinator, Garth Frazer on (07) 5445 4913.
In mid-2005, contractors constructed an equitable access entrance to the Walking Trail and resurfaced the first 800 metres to a standard that allows wheelchair access. BPHTI volunteers are maintaining the new work as well as well as other sections of the 2-3km long trail. The society is currently negotiating with Maroochy Shire Council to develop a five-year plan to further develop the balance of the track.
Garth Frazer, 02/07

New South Wales

ILLAWARRA TRAIN PARK, Albion Park 610mm gauge
Illawarra Light Railway Museum Society
Restoration work in the New Year brought the ex-Goondi mill 4wDM 'Simplex' (Motor Rail 10219/1950) to the stage where painting was completed and trials of the locomotive were undertaken on the ILRMS track. In February the engine of the ex-Condong sugar mill 4wDM Ruston & Hornsby 40 DL Model (B/N 371959/1953) was started and given a good run. It is hoped to have this locomotive in service by mid-year. The running day on 11 February was marred by bad weather, so there were no bay road operations. 0-6-2T *TULLY 6* (Perry Eng. 7967/49/1 of 1949) operated the main line steam trains during the day. On the infrastructure side, restoration works to the Otford Signal Box have been completed and a fettlers' shed has been constructed beside it. This will be fitted out as a display building to complement the Otford Box display area.
There was a changing of the guard at the ILRMS annual general meeting in February 2007. Brian Holmes, the society's esteemed life member and long-serving board member, retired as the operations manager. A special function was held at the meeting to honour Brian for his lifetime of dedication to the ILRMS. Tony Madden, the ILRMS founding member, has taken over the operations manager position.
Brad Johns 02/07

JOHN FOWLER 7607, Kirrawee
Ex-Isis Mill John Fowler 610mm gauge 0-6-0T 7607 of 1896 was reported to be for sale in 2004 at $18,000 (LR 177, pp.25 and 27). It was then described as having been in a shed for 19 years, but appeared to be in open storage at an industrial site. It was advertised again in *The Old Machinery Magazine* for February-March 2007, this time at $25,000 and evidently located at the same site. The advertisement gives the gauge as 2ft 6in!
Bruce Belbin, 02/07

LAKE MACQUARIE LIGHT RAILWAY 610mm gauge
Grahame Swanson
Ex-Australian Army Malcolm Moore 4wPM (B/N 1050 of 1943) purchased from the Megalong Valley Railway by Grahame Swanson, together with a passenger carriage purchased by Graeme Belbin, arrived at Toronto on 1 February 2007. The Malcolm Moore, which is in very original condition and still with its Ford V8 side-valve motor, went to the Victorian Electricity Commission after the war and worked on an ash disposal line at Yallourn Power Station for many years. It was purchased by Bob Hague in 1974 and went to Megalong Valley by 1981. The locomotive has not run for 20 years and, although the engine and gearboxes appear to be in good order, it will require repairs to the radiator, fuel pump and water pump, and a new bonnet.
The bogie carriage was built at Goulburn Steam Museum in the early 1980s, in the style of an early tramcar, but with a tubular steel frame, aluminium cladding, wooden slatted bench seats and 'mining' style bogies. Along with the purchase of the Malcolm Moore, three 4-wheel trucks were included in the deal. One arrived with the loco and the two others - one described as a long-wheel-base flat truck and the other as a 'tub' – are to be collected. Two whole-stick cane trucks and a flat top wagon (converted from a cane truck) from the same source also arrived at the LMLR before Christmas. The latter has now become the fire-fighting wagon (LR 193, p.27), whilst the former will be restored to original condition with their North Eton numbers reinstated. The new building for NOMAD station was installed early in 2007 and much of the track between the branch points and this station was re-laid and realigned.
Graeme & Bruce Belbin, Steve Saunderson 0307 www.lmlr.org.au

Victoria

ALEXANDRA TIMBER TRAMWAY & MUSEUM
610mm gauge
Further to the report in LR 193 (p. 28), refurbishment of the small bogie carriage was completed to the stage for it to be returned to the track on 31 December 2006. Denys Steinhauser originally built this carriage in 1979 as 'The Dustlander' for the Yangardook Tramway at Toolern Vale. The refurbishment involved complete re-cladding of one side and half of both ends of the vehicle, fitting a new roof section and the manufacture of two new steel bolsters to replace the wooden ones originally fitted. These fit snugly inside the timber under-frame, significantly stiffening and strengthening the frame and lowering the centre of gravity. The two Bochum Union bogies were completely stripped down and the original frames were replaced with ones in much better condition. All journals and wheel flanges were checked against condemning limits and found to be in good shape.
The stripped components of the bogies were rust treated and painted prior to reassembly on 30 December. A test roll along the track indicated that they are now in close to original condition. Final painting and lettering of the carriage was undertaken in the period following Christmas and the smartly presented vehicle was given a test run behind the Malcolm Moore 4wDM (1049 of 1943) on New Year's Eve.
Timberline No. 94, February 2007

COAL CREEK BUSH TRAMWAY
610mm gauge
Coal Creek Heritage Village
Updating the report in LR 190 (p.27) it has been reported that the Coal Creek Heritage Village and its Bush Tramway resumed operation on Boxing Day 2006. A visitor to the site in January and February 2007 found the railway was in operation with a diesel locomotive hauling the train, but there were very few passengers. Our reporter was unable to ascertain whether the Bundaberg Fowler 0-6-2T steam locomotive No.2 *COUNT STRZELCKI* (7 of 1953) was operational or not. During two further visits the George & George boiler was in steam and the twin-cylinder Roberts & Sons winding engine for the poppet head was being

operated. The rising smoke and sound of the whistle drew the attention of the few visitors.

An impression was gained that operation of Coal Creek in the long term may be doubtful as on the days attended, the number of visitors was very low. Maintenance of the village appears to be minimal with very few attractions being operated. Sadly the oil engine powered sawmill has been demolished and the equipment dumped behind a shed as it was considered to be a hazard to the public. It was considered by many to be one of the most authentic looking re-created sawmills to be seen in this country. Many attractions in the lower section of the village have not been used for a long time and are becoming overgrown. The cafeteria in the main entrance building remains closed with refreshments only available from the hotel within the village.

Bill Hanks, 02/07

PUFFING BILLY RAILWAY

762 mm gauge

Emerald Tourist Railway Board

Footplate Experience rides with the opportunity to drive the 120-year old 2-4-2ST No. 861 *J.C. REES*, (Couillet B/N 43 of 1886) recommenced in March 2007 and will continue most weekends through to November. Participants have exclusive use of the locomotive for a day, under the expert supervision of an experienced Puffing Billy Railway driver. They get the opportunity to light the fire, lubricate the locomotive, learn how to raise steam and how the Westinghouse brakes work, before spending several hours firing and driving the locomotive over a very challenging route. The day commences at 7am and after a full day of activities on the line between Belgrave and Cockatoo, the locomotive returns to the depot and drops its fire around 4pm. Funds raised go to the Climax locomotive restoration.

The February issue of the PBR *Monthly News* noted that the financial position of the operation looked bleak from the 2005-2006 returns as the long-term costs of the Gembrook extension started to 'bite', trading results fell short of budget predictions and the need to match State government grant funding had seriously depleted reserves and working capital. The situation was placing the long-term future of the PBR under threat and, accordingly, the Board and management team implemented a series of measures in September 2006 to turn the financial situation around. By December 2006 significant improvements were reported in a number of areas, with cash balances double those of December 2005 and working capital had also increased significantly. In order to cover operating costs during the winter months and to avoid making a loss after depreciation, however, annual profit needed to be increased by some $500,000 per year.

In February 2007, three NA locomotives, 6A, 8A and 14A, were in traffic, with 7A having its wheel sets re-profiled, a new bunker fitted, repairs made to cracks in the frame and the axle boxes machined. No. 12A was in the process of disassembly by Navy trainees from HMAS Cerberus for refurbishment. The ETRB CEO Andrew Stephens resigned for family and personal reasons effective from 19 February 2007. The Chief Operating Officer, John Hoy, has been appointed as Acting CEO, pending the due process of recruiting and appointing a replacement CEO.

Editor; PBR website; PBR *Monthly News*, February and March 2007

Coming Events

APRIL 2007

6-9 8th Australian Narrow Gauge Convention, Melbourne, VIC. *Modelling the Australian Scene* is the theme for the convention, to be held at Carwatha College, Noble Park North, 28km SE of Melbourne on the Monash Freeway. Registration: Laurie Green (03) 9744 5188 (AH) or check the website: http://www.users.bigpond.com/nawlins/ngconvoz.htm

7-9 Alexandra Timber Tramway & Museum, VIC. Gala Steam Festival with steam-hauled narrow gauge steam trains (1000-1545), traction engines, stationary engines and museum displays. Information: Diesel-hauled trains operate on 22 April. Bryan 0407 509 380 or Peter 0425 821 234.

8 Illawarra Light Railway Museum Society, Albion Park, NSW. Operating day with two narrow-gauge trains on mainline, plus the trolley-wire miners' tram and miniature railway 1030-1630. Phone: (02) 4256 4627 or www.ilrms.com.au

8 Cobdogla Irrigation Museum, SA. Operating day with Humphrey Pump and narrow gauge steam train. Phone (08) 8588 2323.

8 Wee Georgie Wood Railway, Tullah, TAS: narrow gauge steam train operates 10am-4pm. Last operating day of the season. Phone: (03) 6230 8233.

20-22 Richmond Vale Railway, Kurri Kurri, NSW. *Hunter Valley SteamFest 2007* with two steam trains operating at the RVR site. Drive direct to the museum or purchase an entry ticket at the RVRM sale stand at Maitland station. Phone: (02) 4358 0190.

MAY 2007

5-6 Redwater Creek Steam & Heritage Society, TAS. Operating weekend with narrow-gauge steam railway rides 1100-1600. Information Chris Martin, phone (03) 6334 8398 or 0429 418 739.

6 Puffing Billy Railway, VIC. 26th *Great Train Race* – race against Puffing Billy's 'big brother' locomotive G42 and see if you can beat this veteran steam train in this popular annual event. Entries close 19 April. Information: (03) 9757 0775 or http://www.puffingbilly.com.au/info/specials/great_train_race.htm

13 Alexandra Timber Tramway & Museum, VIC. Steam-hauled narrow gauge steam trains (1000-1545) and museum displays. Diesel-hauled trains operate on 27 May. Information: Bryan 0407 509 380 or Peter 0425 821 234.

13 Illawarra Light Railway Museum Society, Albion Park, NSW. Operating day with two narrow-gauge trains on mainline, plus the trolley-wire miners' tram and miniature railway 1030-1630. Phone: (02) 4256 4627 or www.ilrms.com.au

19-20 Richmond Vale Railway, Kurri Kurri, NSW. *Model Expo* with steam trains operating and model layouts at Richmond Main and Pelaw Main. Phone: (02) 4358 0190.

20 Bennett Brook Railway, Whiteman Park, WA. *Friends of Thomas the Tank Engine Day* with unlimited rides on narrow-gauge steam and diesel-hauled trains, plus vintage bus rides and 'Incredible Creatures at Mussel Pool. Inquiries and bookings, phone Jill (08) 9381 9648.

JUNE 2007

10 Illawarra Light Railway Museum Society, Albion Park, NSW. Operating day with two narrow-gauge trains on mainline, plus the trolley-wire miners' tram and miniature railway 1030-1630. Phone: (02) 4256 4627 or www.ilrms.com.au

10-11 Richmond Vale Railway, Kurri Kurri, NSW. 'Coalfields Steam' weekend celebrating 150 years of continuous steam operations on the Richmond Vale Railway. Phone: (02) 4358 0190.

10-11 Alexandra Timber Tramway & Museum, VIC. Steam-hauled narrow gauge steam trains (1000-1545) and museum displays. Diesel-hauled trains operate on 24 June. Information: Bryan 0407 509 380 or Peter 0425 821 234.

Note: Please send information on coming events to Bob McKillop – rfmckillop@bigpond.com - or the Editor, Light Railways, PO Box 674, St Ives NSW 2070. The deadline for the June 2007 issue is 5 May.

Western Australia

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

The 4wPM *RIDLEY No.1* built by Whiteman Brick Pty Limited about 1968 arrived at the Mussell Pool workshops in November 2006. Following its retirement at the brickworks, it went to Len Brakovich's 'Dizzy Lamb' theme park at Wanneroo in 1983, latter going into storage at Middle Swan. Len recently released his possession of this loco, allowing its transfer to the BBR.

Charles De Bruin has made steady progress in restoring the much-travelled Krauss 0-4-0WT (B/N 2181 of 1889). This loco was originally used by contractor John Robb on the Victoria Dock construction in Melbourne before going to the South Australian Chief Engineer's Department for construction work on the Happy Valley Reservoir around 1892. It is believed it went to Bulong Ore Reduction & Tramway Company in Western Australia in 1897 and then worked at the East Murchison United Gold Mine at Lawlers in 1902. In 1922 the diminutive loco found its way to the Western Machinery Company at Kalgoorlie, where it rested until going to the WA Division of the Australian Railway Historical Society at Midland Workshops in 1963. The locomotive went to WALPA for preservation in 1984. Its restoration is a challenging task – the boiler is beyond repair and there are gaping holes in the well tank. As shown in the photo on p.30, the boiler and tank have been placed on 'horses' to allow repairs or the fitting of sub-tanks inside the original. By November 2006, the bottoms had been removed and the interior of the tank had been sandblasted. The driving wheels have been re-profiled and the journals have been skimmed, while the springs have been sent to an outside contractor for rebuilding.

A significant milestone was reached by WALRPA on 23 February 2007, when 2-8-2 NG15 Class No.123 *FREMANTLE* (Franco-Belge 2670/1951) underwent its first steam test following extensive overhaul. This included the installation of a brick arch in the firebox by Ross Parker during 2004. The fire was lit at 5pm and, over a pizza dinner, the volunteer crew brought the pressure up to 60psi to allow the

testing of injectors to begin. The test continued until full pressure was reached at 129psi around 9pm. An inspection of the firebox found the desired result – no leaks on the union of the superheater header to the tubeplate. The sound of a South African chime whistle again reverberated over the park to celebrate a successful test!
BBR website news; Charles De Bruin, 11/06; Lindsey Watson 11/06

BUSSELTON JETTY RAILWAY
1067mm gauge
Efforts to restore Busselton jetty and return its tourist railway to service (LR 189, p.30) remain bogged down by bickering between Federal, State and local governments over funding. By January 2007, the State Government had initiated a land sell-off to fund its share of the $18 million required for the project and the Busselton Shire Council had borrowed its $6 million share, but the Federal Government continued to resist making a contribution. Prime Minister John Howard responded to a request by the WA Premier Alan Carpenter by asking the State government to make a greater contribution and indicating that some Federal funds (up to $500,000) could be made available through tourism and regional development grants. Mr Carpenter stated that the site had been the fourth most visited in the State and the loss of the jetty would result in the direct loss of 100 jobs in the tourism industry over ten years.
Busselton-Dunsborough Mail, 24 January 2007, via Barry Blair

Overseas

FERROCARRIL AUSTRAL FUEGUINO, Argentina
500 mm gauge
In response to the article 'K1 Steams Again' in LR 193, Hugh Ballment has forwarded the accompanying photo of the 0-4-0+0-4-0T Garratt locomotive operating on the Ferrocarril Austral Fueguino (FCAF) in Argentina. Hugh and his wife visited this line in April 2005. The 9-tonne Garratt is FCAF No. 2, which was built locally in 1994 and was based on the design of the famous Tasmanian Government Railways pioneering K1. Originally named *NORA*, this locomotive was renamed *Ing L.D. PORTA* in 2002 following modifications based on the famous Argentine locomotive engineer's 'high-efficiency principles'.
The FCAF was reported in LRN 117 of April 1997 (p.18), but as many current readers will not be familiar with this, some additional background is provided here. Promoted as *El Tren del Fin del Mundo*, the FCAF is the world's most southerly operating railway - at almost 55°S, it equates in latitude with Australia's sub-Antarctic Macquarie Island. The 5km 500mm gauge line was laid on the roadbed of a former narrow gauge prison railway built by convicts in 1896 that operated until 1947. The FCAF, built as a tourist line for visitors to the Tierra del Fuego National Park, opened for business in October 1994. Trains depart from Estacion del Fin Mundo station (End of the World Station), 8km west of the port of Ushuaia (population 42,000), and traverse a narrowing valley with snow capped mountains fringing the route past waterfalls, a reconstructed indigenous settlement, a peat bog and through woodland to the terminus at Estacion Parque Nacional.
There are now two other steam locomotives on the line. No.3 *CAMILA* is a Winson Engineering 2-6-2T (15 of 1995), built in England and based on the famous Lynton & Barnstaple 2-6-2T locos; while No.5 Ing *H.R. ZUBIETA* is the world's newest Garratt locomotive, which arrived in late 2006 and was placed on display with the other locomotives on 17 January 2007. This 0-4-0+0-4-0T Super Garratt locomotive was built in South Africa, mainly from new components produced by Phil Girdlestone's engineering firm and incorporating parts produced in 1994 for a second Garratt loco. All steam locomotives are gas fired. There are also two diesel locomotives available for passenger services, of which No.1 *RODRIGO* is an Orenstein & Koppel 0-6-0DM built in 1936 and converted from 600mm gauge, while the other is the 12-tonne 0-6-0DM No.4 *TIERRA DEL FUEGO*, built in South Africa by Girdlestone Rail in 1999.
The coaching fleet comprises 16 vehicles, with earlier vehicles being based on American freight car design. In 1995 Winson Engineering

Restoration of the former Buderim-Palmwoods Tramway 762mm gauge 0-6-2T locomotive (Krauss 6854 of 1914) for static display at Buderim had reached this stage, with the new cab and bunker refitted, when Garth Frazer took this photo on 10 January 2007.

Megalong Valley Railway proprietor Keith Duncan walks alongside former Victorian SEC Malcolm Moore 4wPM (B/N 1050 of 1943) about to be loaded for the journey to its new home on the Lake Macquarie Light Railway at Toronto, on 1 February 2007. *Photo: Steven Saunderson*

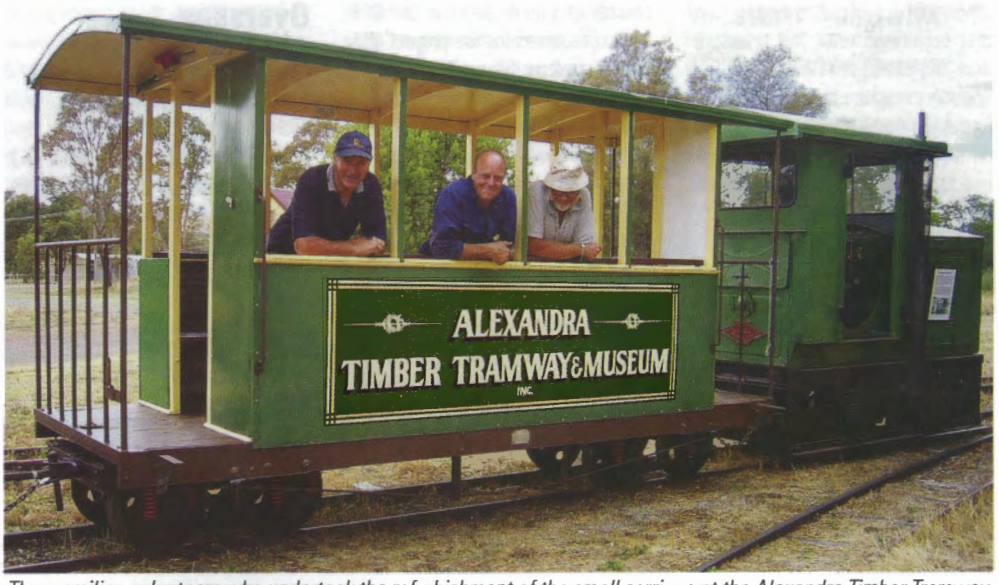
supplied the three superbly built side-door tourist coaches to a new design. They have improved bogies incorporating the thread steering principle and fitted with air braking. Well upholstered in burgundy fabric, the cars have proper 'railway type' doors and windows which would appear to be necessary in the conditions experienced on the line. It is intended to replace bogies on the older coaches with the new design. Tourist and first class accommodation is available on board all trains, with the latter offering individual seating with accompanying tables and a buffet service.
Hugh Ballment 02/07;
www.martynbane.co.uk/modern-steam/smcmahon/smfcaf.htm

SAGANO SCENIC RAILWAY, Japan 762mm gauge

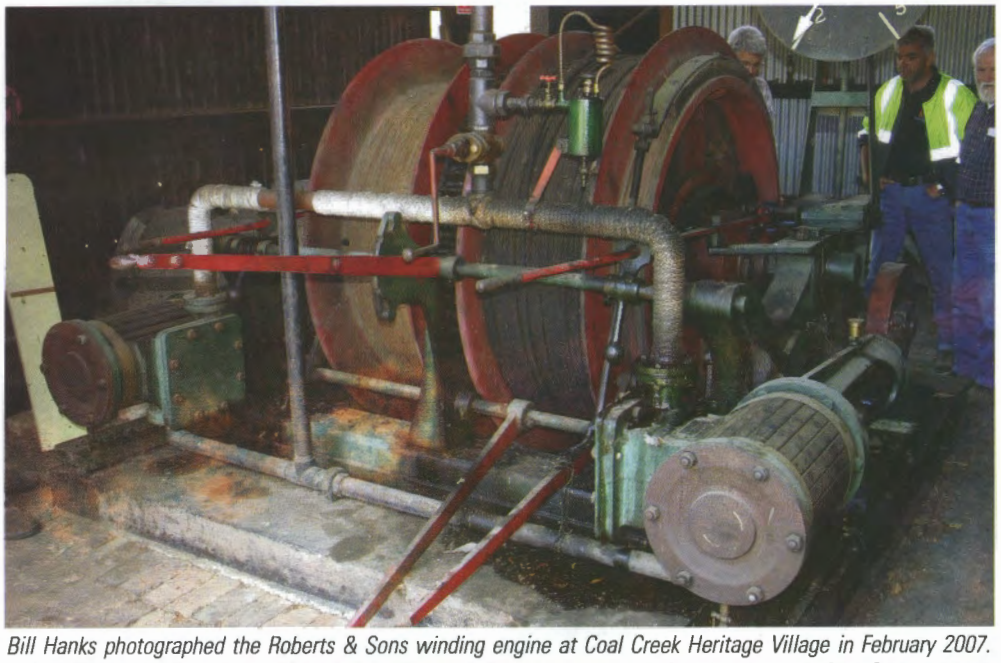
The Sagano Scenic Railway, established in 1991, is a subsidiary of the West Japan Railway Company. The line commences from Arashiyama, one of the most popular sightseeing areas of Kyoto and runs at a leisurely pace down the Hozukyo Valley, which is famous for its breathtaking views in the canyon. The journey from Trokko Saga station (near the Saga-Arashiyama JR station) to Trokko Kameoka station takes about 25 minutes. The railway operates from 1 March to 29 December and open coaches are used if weather permits. Bo-Bo diesel-hydraulic locomotives haul the five-car trains. A museum is located in the Trokko Saga station.
David Burke, 02/07

WELSH HIGHLAND RAILWAY, United Kingdom
597mm gauge

There has been a positive response to our feature article on ex-Tasmanian Railways 0-4-0+0-4-0 K1 (Beyer Peacock 5292 of 1909) in LR 193, including updates on its current status at the WHR. In late January 2007, K1 had its oil firing equipment removed. A new grate, fire doors, bunker, etc were being fitted for coal firing trials to begin. The firebox was to be returned to a more original condition and coal rails fitted around the bunker following removal of the oil tank. The unreliable driver's injector had been removed for 'surgery'. The target date for a return to service was prior to 24 March.
Andrew Rutter 02/07; Tim Goodspeed, 02/07



Three smiling volunteers who undertook the refurbishment of the small carriage at the Alexandra Timber Tramway & Museum – Bryan Slader, Phil Thorn and Ray Graf – celebrate its return to the tracks on 31 December 2006.
Photo: Peter Evans



Bill Hanks photographed the Roberts & Sons winding engine at Coal Creek Heritage Village in February 2007. In its pre-preservation days, this unit was damaged during a period of industrial unrest at Coal Creek when a charge of dynamite was placed under the left hand cable drum by a disgruntled miner.

Krauss 0-4-0WT (B/N 2181 of 1889) under restoration by WALPRA in November 2006. Photo: Charles De Bruin

Black NA class 2-6-2T 8A (Newport Workshops 1908) passes black G class 2-6-0+0-6-2 G42 (Beyer Peacock 6268/1925) at the Puffing Billy Railway locomotive depot, Belgrave, on Monday 8th January 2007. Photo: Peter Murray ❑ *A 762mm gauge four-wheel coach photographed by Catherine Burke in the museum at the Trokko Saga station in Kyoto, Japan in October 2006.* ❑ *The Porta 'high-efficiency' treatment on the 0-4-0+0-4-0 Garratt locomotive No.2 on the 500mm gauge Ferrocarril Austral Fuenguino in southern Argentina may not enhance its appearance, but is reported to have improved performance. Hugh Ballment took the photo during a visit to this remarkable line in April 2005.*

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