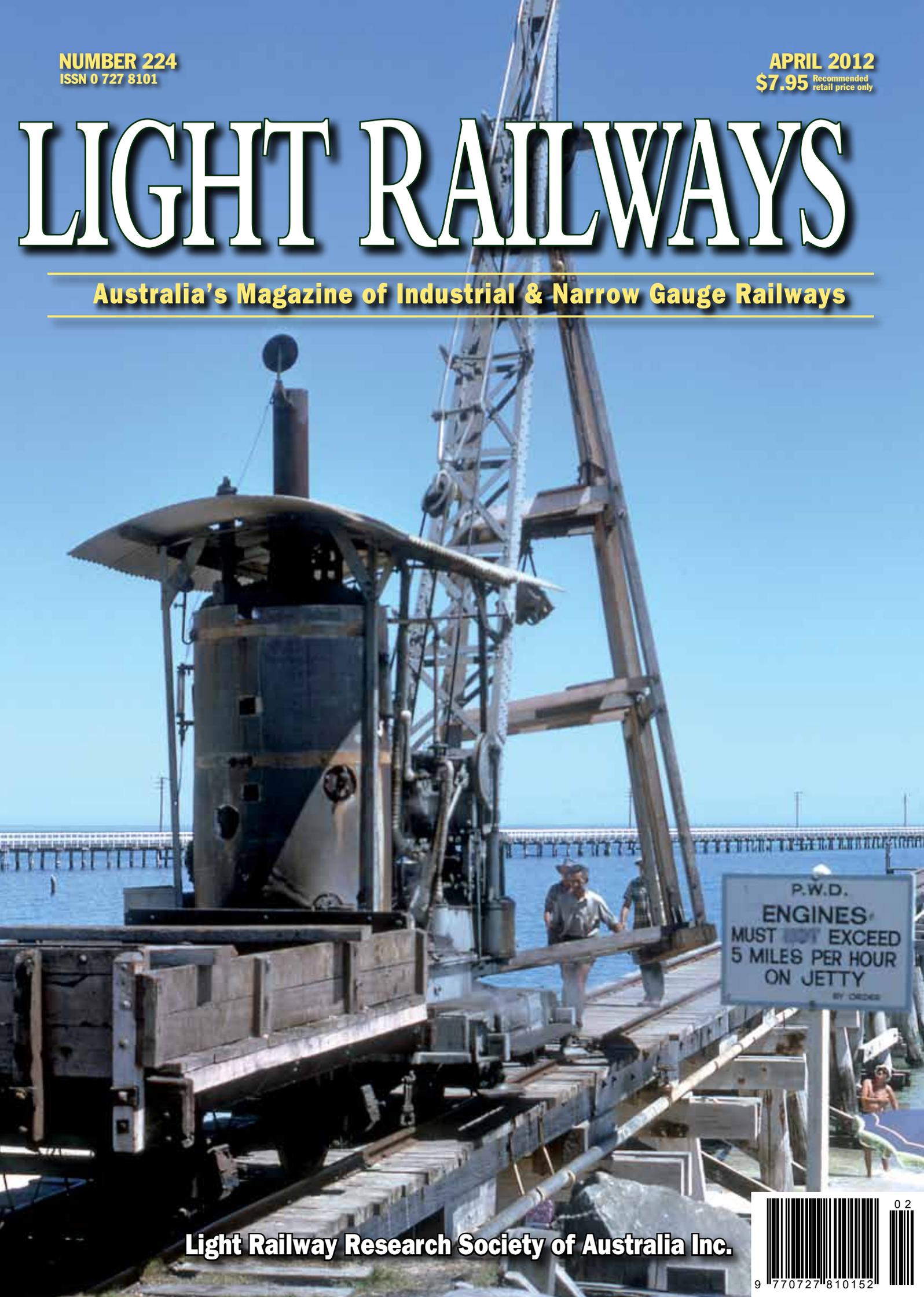


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# LIGHT RAILWAYS

**Australia's Magazine of Industrial & Narrow Gauge Railways**



**Light Railway Research Society of Australia Inc.**



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## LIGHT RAILWAYS

Australia's Magazine of Industrial and Narrow Gauge Railways

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### Imperial to metric 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 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

1 super foot 0.00236 cubic metre

(sawn timber)

## Contents

<i>BALLAARAT</i> – its story	3
El Arish days	12
F&M Baldwin Engineering 1993–2004	16
Industrial Railway News	24
Letters	30
Research	33
Heritage & Tourist News	34

## Comment

In this issue, we have three excellent contributions as our feature articles.

We welcome Philippa Rogers, who takes a fascinating look at a pioneering industrial locomotive and the 107-year long saga of its preservation. Philippa is a historian and heritage consultant with a particular interest in railway history and she has provided valuable assistance to a range of heritage railway groups over the years.

Len Heaton returns to tell of some of his personal experiences on sugar mill locos at Tully. Len later became a Chief Cane Inspector and was always very generous to those who took an interest in the cane railways. His last contribution was about his time at South Johnstone Mill (LR 166). We hope that the wait will not be so long next time.

Craig Wilson passed on 8 years ago and this issue contains the final article that he wrote following the publication of his outstanding book *Built by Baldwin*. His chronicling of the history of EM Baldwin and their successors has been a major legacy to us all. I hope that someone will take up the challenge of continuing Craig's work by ensuring that the railway work of Sydney-based Ontrak Engineering, the latest exponent of the Baldwin heritage, is recorded as comprehensively.

*John Browning*

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

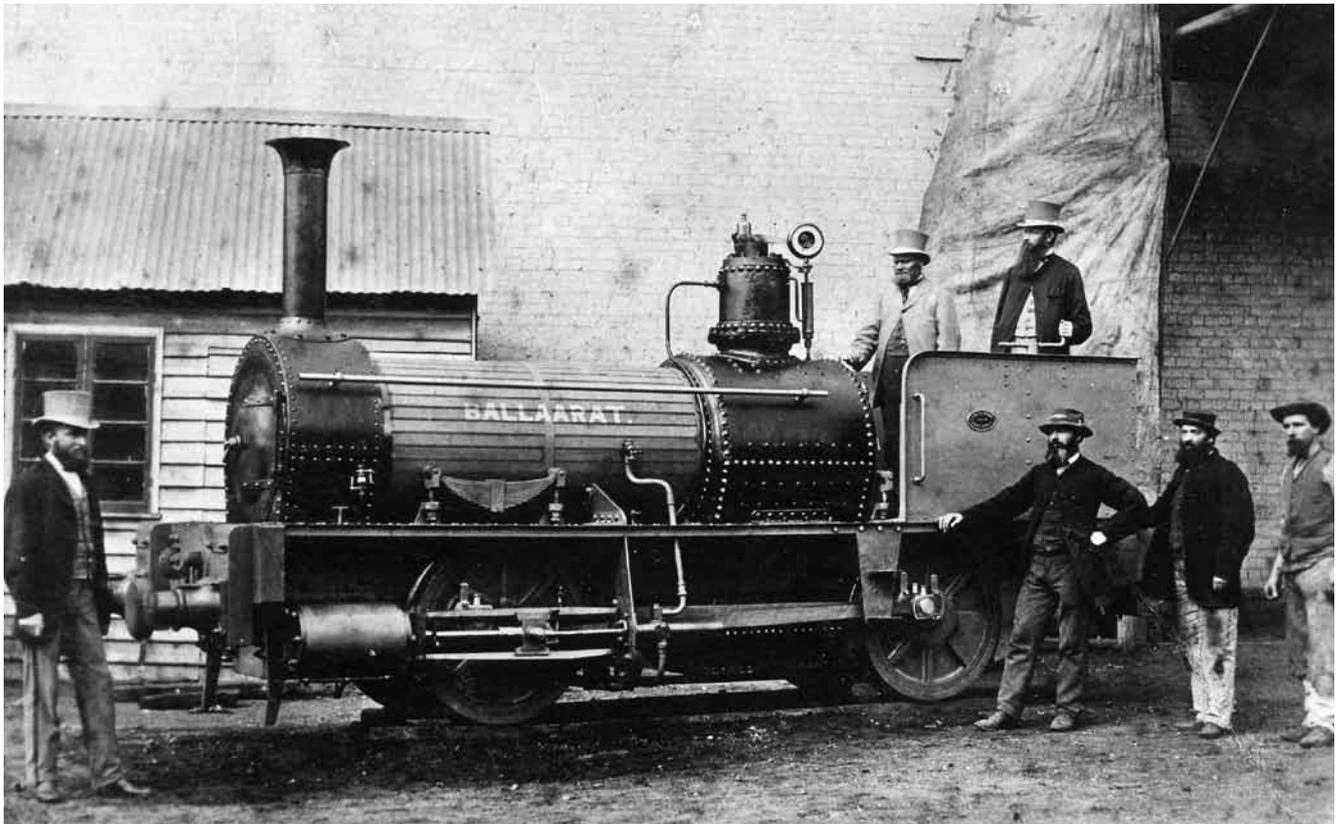
Members are actively involved in researching light railways in libraries and archives, interviewing knowledgeable first-hand participants and undertaking field work at industrial sites and in the forests.

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

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:** Several decades after the Western Australian Timber Company's pioneering locomotive BALLAARAT last turned a wheel, industrial steam power could still be seen in action in the Busselton district. On a visit to Busselton Jetty, on a sunny Thursday 21 January 1971, Robert Kingsford-Smith was pleasantly surprised to discover a self-propelled vertical-boilered steam crane engaged in maintenance work on the lengthy wooden structure.



BALLAARAT in the manufacturer's yard, 1871.

Photo: Rail Heritage WA Collection, P4717

## BALLAARAT – its story

by Philippa Rogers

The locomotive *BALLAARAT* displayed in Victoria Square at Busselton has received many references in *Light Railways* over the years, but a detailed examination of its history has been lacking. This article, based on extensive research in archives, newspapers and other published material, brings the history of this important locomotive together from 1871 though to its current status at Busselton.

### The railway

In August 1871 at Lockeville, just outside the township of Busselton, Western Australia's first steam locomotive entered service.<sup>1</sup> The engine, painted black, had cost £780 plus the cost of shipping from Melbourne.<sup>2</sup> It had been intended to land the locomotive before August that year but the winter seas and rough conditions on the Busselton coast delayed its landing. Local residents were ready to celebrate its arrival on 1 June (Foundation Day) but had to wait until the brigantine *Nightingale* delivered it in late August 1871. The first driver of *BALLAARAT* has been named as a Mr Jackson who took charge of it for five years after the Western Australian Timber Company's (WATC) engineer, Mr Watson, who drove it upon arrival, returned to Melbourne.<sup>3</sup>

The 3ft 6in railway was established for the WATC, a syndicate of Victorian investors, and was a consequence of the granting of a timber concession of 181,500 acres. This was the first such concession taken up following Governor Weld's change in policy that permitted large timber concessions on a long-term basis, thus encouraging outside capital. The railway ran between the port of Lockeville, where the WATC's jetty and mill was built, 18km inland to Yoganup. Though it was completed in June 1871, the railway was initially operated by horses because of the difficulties in the landing of the locomotive.

### Locomotive construction

A contemporary (March 1871) Victorian newspaper report from Ballarat says:

*A very interesting ceremony took place at Mr James Hunt's Victoria Foundry, Armstrong St, this forenoon, being the christening of a locomotive engine made by Mr Hunt for the Western Australian Timber Company. The ceremony was performed in orthodox fashion by Mr McPherson, the Mayor of Melbourne, a large number of gentlemen and workmen being present. ... The engine had been fixed up on blocks to keep the wheels off the ground, and steam got up and it was set to work. ... It was designed by Mr G Robinson, the general foreman of the Victoria Foundry. ... Mr Hunt says he would have no difficulty in making the largest sized locomotives for our colonial railways as cheaply as they could be imported, if only the material were allowed to enter the colony duty free.*<sup>4</sup>

The same newspaper article gave the locomotive's specifications as:

*... Has two 7in cylinders, of 3ft 6in gauge with coupled wheels, is 8 tons weight and 16 hp nominal but will draw as much as 60 horse actually and is made for iron rails 12 to 15 miles in length.*

The first locomotive built in Australia had been constructed in haste in 1854, as the first railway was almost ready for opening but the locomotives had not arrived from England.<sup>5</sup> It was constructed in just ten weeks and did not manage to run for even three months before being declared unfit for service. As a consequence trains on the Melbourne and Hobson's Bay Railway were suspended for two months until the ordered locomotives arrived. 'Experimental' would probably be the best description for this broad gauge steam locomotive that operated for just a few weeks.

The first steam locomotive constructed in Ballarat had been built by Hunt & Opie and was completed in 1861.<sup>6</sup> It was a strange contraption designed by James Davies to operate on wooden rails using his patent system of guide wheels. Named *LADY BARKLY*, the locomotive was demonstrated to Australian railway interests, without any interested purchaser

coming forward, so Davies exported it to New Zealand in 1863, where he had convinced officials in the Province of Southland to construct a standard gauge wooden-railed railway — the Oreti Railway — to his design. Export to New Zealand proved to be a winner for Davies as he received orders from the Oreti Railway for two more powerful locomotives to be built in Ballaarat to his design by the Soho Foundry in 1864. Unfortunately they were no more successful than the diminutive *LADY BARKLY* and the railway closed in 1867.<sup>7</sup> The construction of the 0-4-0WT locomotive by the Victoria Foundry for the Western Australian Timber Company in 1871 was the commencement of many years of commercial locomotive building by the local foundries. It was the first locomotive built in Ballarat for Australian use, the first locomotive in WA, and the first of 3ft 6in gauge to be manufactured in Australia. It was named *BALLAARAT* to commemorate the town of its manufacture and used the original spelling for that centre.

Of interest is that the second locomotive in WA was also built by a Ballaarat foundry, this time by the Phoenix Foundry Company, which was to dominate locomotive construction in that centre.<sup>8</sup> Named *GOVERNOR WELD*, this locomotive started work in 1872 for the Rockingham & Jarrah Co of WA. Unfortunately it is no longer in existence. A number of writers, including some correspondents in official files, have stated that *BALLAARAT* and *GOVERNOR WELD* were the same locomotive and that just a name change took place. However records of the Ballaarat foundries and the fact that the locomotives were used by different companies at the same time are convincing evidence that the two locomotives are exactly that — two different locomotives.

### The WA Timber Company

The WATC railway continued to grow, reaching 30km in length and two extra mills were built. In 1877, there were reports that the Lockeville jetty was in a poor state of repair and the locomotive was found to be in a dilapidated condition.<sup>9</sup> The company was in financial difficulties by mid 1887 and

the mills closed. No way out of the difficulty was found and so on 2 June 1888 all the WATC assets were auctioned.<sup>10</sup>

MC Davies, Herbert Davies and Mr Butler (Karridale resident engineer) went to Busselton on 3 July 1890 with the intention of inspecting the locomotive *BALLAARAT* at the WA Timber Company. It was reported that they intended to buy it and run it on the railway lines at Karridale and Boranup.<sup>11</sup> As the locomotive remained in situ, it appears that it was found by them to be unsuitable for their purposes.

Due to complications in transferring the WATC's timber concessions a return to operations at Lockeville did not occur until 1893 but even then the operations were not to last. The railway, including the locomotive *BALLAARAT*, was abandoned. The WA Government was the next owner, purchasing the land, railway, mills and machinery as well as the timber concession in May 1895. This was an unusual move for the government, but was the result of a potential problem created when it was realised that the timber concession granted 2000 acres for each mile of railway built but did not say where the concession could be claimed.<sup>12</sup> With the gold boom underway in the Eastern Goldfields, the government could not afford for the concession to be claimed in that area.

In November 1897, the timber concession was passed to the Jarrah Wood and Saw Mills Company and it seems that *BALLAARAT* was just stored in a shed at Lockeville. Unfortunately c1900 the shed caught fire and the locomotive was badly damaged.

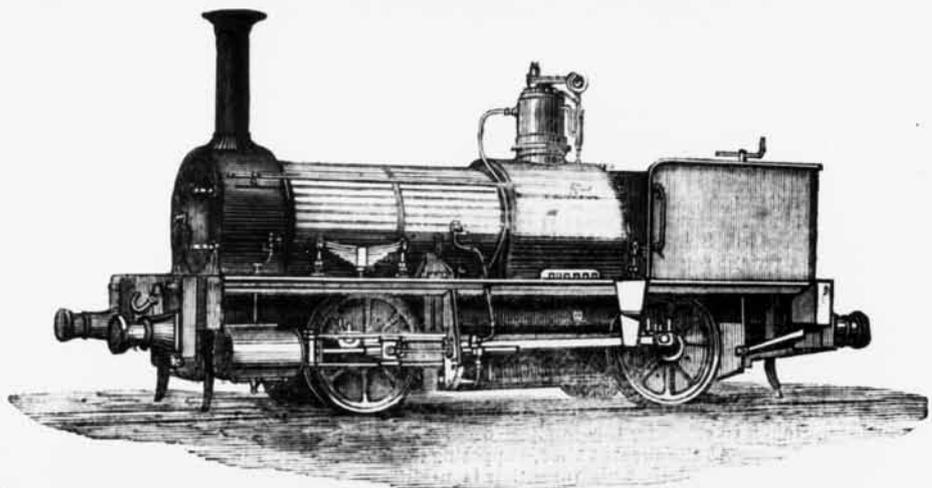
### BALLAARAT – after the fire and out of service

By 1900 *BALLAARAT* had been modified from its original form. The water for its boiler was originally held in a well tank but, with a demand for more water and fuel than the locomotive could carry, a four-wheel tender had been constructed. The footplate was shortened by 12 inches, possibly to facilitate the tender, and the cab moved forward. Entry to the cab was then from the side rear steps, rather than from

## LOCOMOTIVE ENGINE FOR THE THREE FEET SIX INCH GAUGE.

BUILT BY MR. J. HUNT, VICTORIA FOUNDRY AND IRONWORKS, BALLARAT.

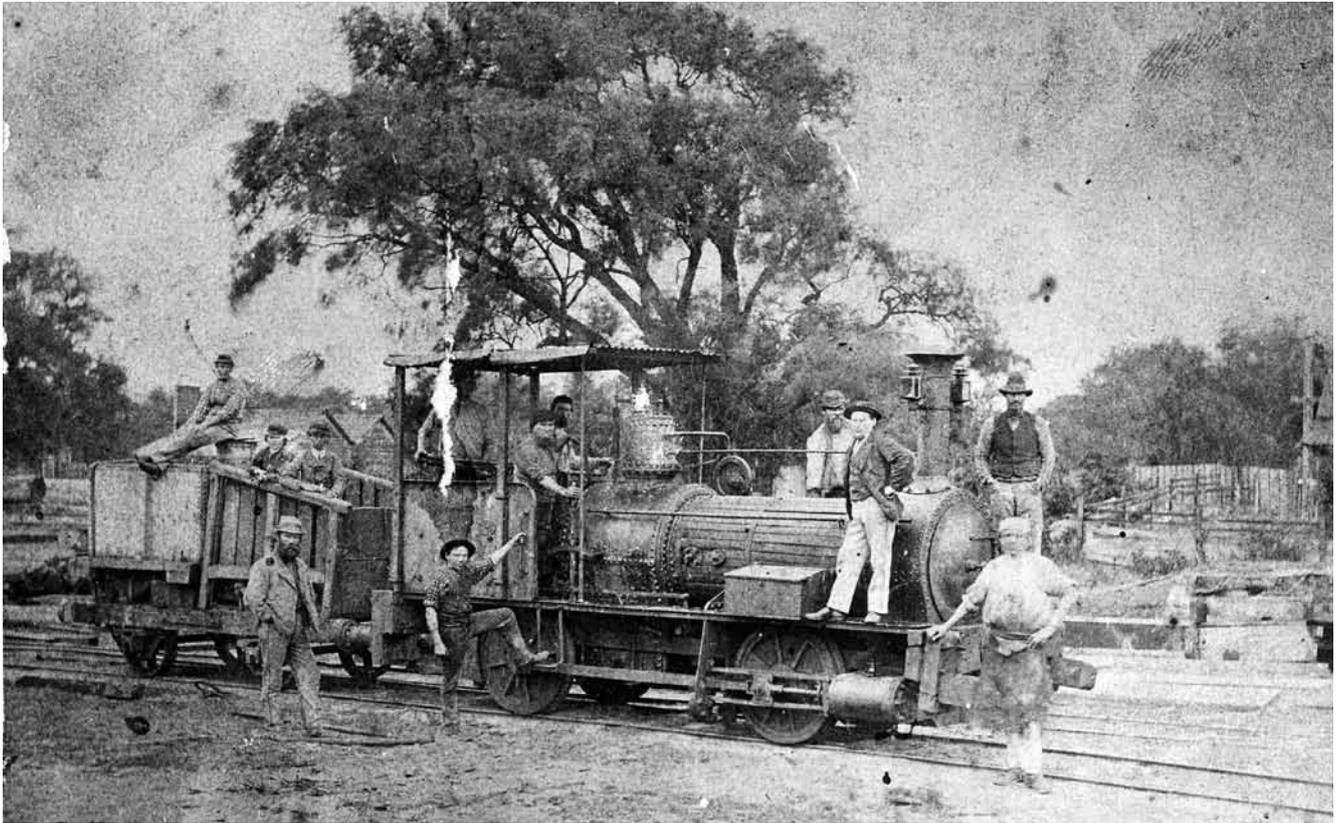
In the annexed engraving we illustrate a neat little four-wheel tank locomotive for a 3ft. 6in. gauge railway belonging to the Western Australian Timber Company, manufactured by Mr. Jas. Hunt, of the Victoria Foundry, Ballarat, and designed by Mr. J. Robinson. The following are the principal dimensions:—Diameter of cylinders, 7in.; stroke, 1ft. 2in.; centre to centre of cylinders, 5ft.; diameter of wheels, 3ft.; wheel base, 8ft. 4in.; length over buffer beams, 16ft. 9in.; height of draw bar, 2ft. 6in.; boiler barrel, 6ft.; diameter of barrel, 2ft. 9in. height of centre above rail, 4ft. 6in.; length of fire-box, 3ft. 4in.; width of fire-box inside frame, 2ft. 11in.; number of tubes, 60; diameter 2in.; tube plates, ½in. and ¾in.; links and pins all steel; boiler all Lowmoor, ¾in. and ½in.; heating surface, about 200ft.; capacity of tanks under frame, 200 gallons. Fuel, wood; foot-plate room inside fence, 1 ton; weight of engine empty, 8½ tons; weight in working trim, 10 tons; weight on driving axle, 5½ tons; weight on leading, 4½ tons. Price delivered in Melbourne, 100 miles from Ballarat, £780. Black finish; working parts first-class fitting; boiler tested to 200 lb.; has been running under steam at 150 lb. for some time. We may state that this



is the first engine ever manufactured in the southern hemisphere for a 3½ft. gauge.

THE BIDDULPH VALLEY BOILER EXPLOSION.—On Tuesday Mr. Booth, coroner, concluded the inquest on the bodies of the eight men who were killed by the explosion of a boiler at Biddulph Valley Ironworks, North Staffordshire, on the 28th of June. After evidence had been given that the usual working pressure of

A contemporary newspaper article on the subject of the locomotive *BALLAARAT*.

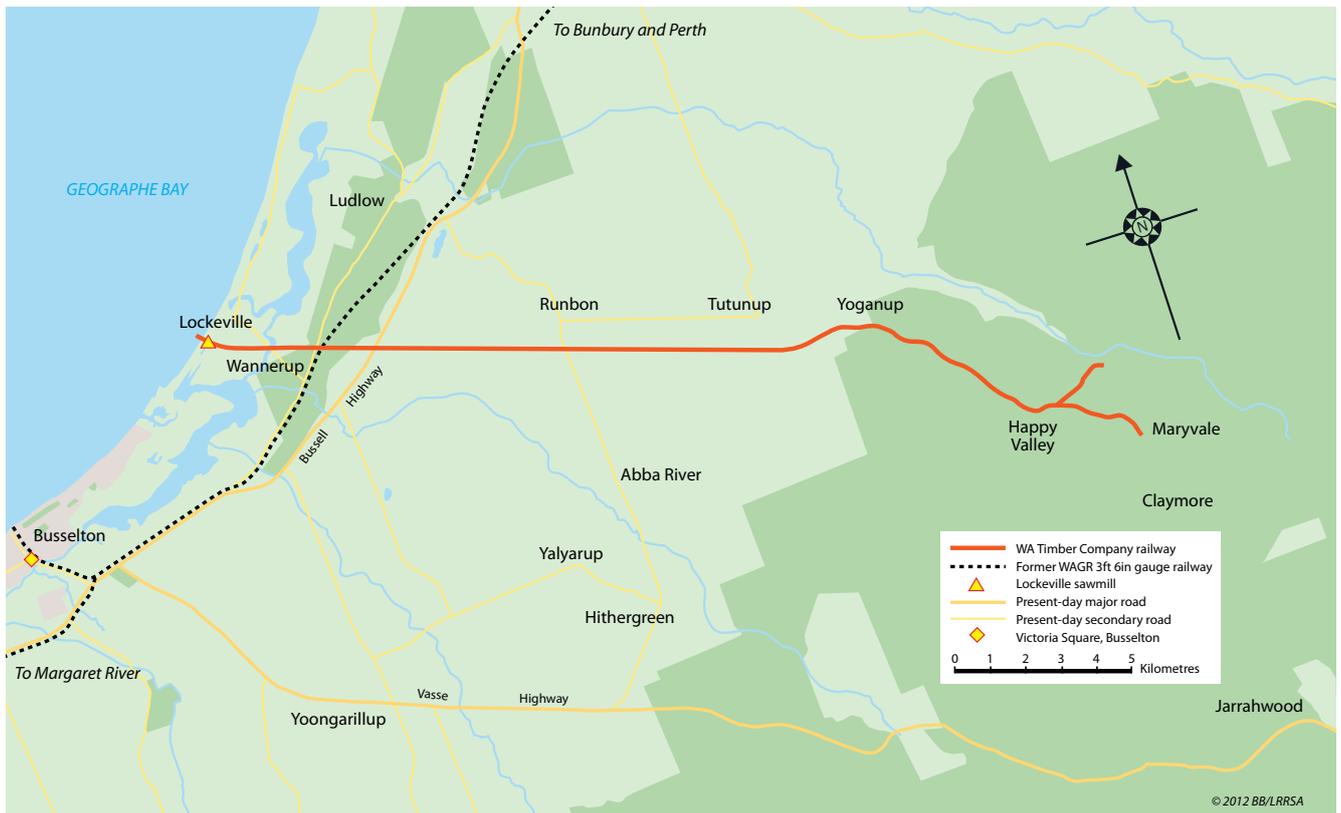


*BALLAARAT* in operation with an early home-built tender. This was later replaced by a more sophisticated metal-bodied example, though the under frame was timber. A hand coloured version of this image is on display at the Railway Museum in Bassendean, and cites the date as 1875. Photo: WAGR

the front alongside the firebox. Other modifications made included replacing the crosshead pump with one driven from an eccentric on the driving axle (as can be seen from photos of *BALLAARAT* after the fire) and fitting a spark-arrestor chimney (photographs show this clearly).

After the fire came an ongoing campaign of concern, with very little outcome until 1937, to see *BALLAARAT*

preserved. Mr Jull, Department of Public Works, wrote on 9 January 1901 to Mr Woodward, Director of the WA Museum and Art Gallery suggesting that *BALLAARAT* as 'the first built locomotive in Australia' and first that ran in WA may 'prove of considerable interest to some of your visitors'.<sup>13</sup> He indicated that Mr Locke, MLA believed he could obtain the loco free of cost for the museum.





A photograph taken around 1908 at Lockeville, showing the fire-damaged locomotive abandoned on the beach.

Photo: R5237/39 'Old Locomotive at Busselton (1st in WA), Rail Heritage WA Archives

But the concept moved slowly and it wasn't until 6 April 1905 that Mr W George, Commissioner of Railways wrote to the Western Australian Government Railways (WAGR) Chief Mechanical Engineer (CME) saying that he had met with Mr Woodward and is prepared to convey the engine to Perth free provided it is put on a truck on the Government line.<sup>14</sup>

As a consequence WAGR loco foreman Bunbury, compiled a report on *BALLAARAT* on 19 April 1905.<sup>15</sup> He describes the engine as being:

*in a very bad state of preservation, a fire about 5 years ago having destroyed all the woodwork, this includes the buffer beams and cab, consequently all attachments to these parts have fallen away. Wood lagging and boiler cleating are destroyed and most of the boiler mountings have been removed. No makers or engine name or date of construction is visible, the connecting, coupling, eccentric rods and link motion are all complete. The tender is a complete wreck owing to fire having destroyed the wooden framing and buffer beams. Apart from the probability of its being the first locomotive built in Australia, it is not suitable for the purpose required, being from an engineering point of view a very poor specimen of locomotive construction of its period.*

Mr Woodward, Museum Director wrote in May 1905 to the Commissioner of Railways to say 'approve of your suggestion that *BALLAARAT* should be left alone, and that eventually No. 1 or No.3 on the Government Railways should, when its work is finished be sent here.'<sup>16</sup>

On 23 April 1909, H Gregory, Minister for Railways, wrote to the Commissioner asking about the practicability of bringing the first locomotive used in the state to Perth and used for exhibition purposes.<sup>17</sup> Commissioner John Short indicated that: 'I think myself it would be a waste of money to do anything, and I cannot recommend it'.

The following year, after Mr Locke, the Acting Premier (Mr Frank Wilson) wrote to the Chairman of the Museum

and Art Gallery Committee asking whether Ballaarat was of sufficient historical import to spend £50 to £100 to have it removed to Perth. Mr Woodward though indicated that the Committee could not afford to contribute towards this cost.<sup>18</sup>

But the battle continued and in April 1910 the Minister for Railways was requested to ascertain the lowest cost at which the loco could be brought to the museum and put in fair exhibition order. He was told by the Premier that his loco foreman 'appears to have very little sentiment. It is not a question of getting a good specimen of locomotive construction: what has to be considered is the fact that this is alleged to be the first locomotive ever to be constructed in Australia and is in fact the first locomotive that ever ran in Western Australia'.

However it was not until 1914 that the District Locomotive Superintendent from Bunbury was sent to ascertain the condition of *BALLAARAT*. He noted that:<sup>19</sup>

*the front buffer beam of engine was originally of timber and has been destroyed by fire; also there were two longitudinal wooden beams carrying the tender have been partly burnt; they together with the buffer beam could be replaced without difficulty or expense. The engine naturally shows signs of the long exposure but a little cleaning up and a coat of paint would make all the improvement necessary.*

But *BALLAARAT* was to stay there as discussions ceased, possibly due to the outbreak of hostilities in World War 1.

In 1919 the *Sunday Times* reported that: 'Busselton has recently acquired the old steam engine (with tender), which was the first steam locomotive engine to be run in the state'.<sup>20</sup> The paper continued to take an interest in the preservation of *BALLAARAT* and was not impressed by the actions, or rather inactions, of the WA Museum.

On 25 September 1921 it published an article entitled 'The Ballarat. First Locomotive in the West' and said:

*We refer to the 'Ballarat' (sic), the first locomotive to be brought*

to these shores. Forlorn, rusting to decay, with all parts that can be removed souvenired, she stands at Lockeville ... Shipped in parts, the 'Ballarat' was reassembled on these shores, and for many a day she played a prominent part in the infant years of our export trade. ... We understand that some years ago the 'Ballarat' was offered to the controlling authorities of the WA Museum but after consideration (we will not say mature consideration) the offer was declined on the grounds of expense. That this priceless old derelict within six miles of sea and rail should be left at the mercy of the elements and the predatory instinct of the souvenir-hunter because the cost of bringing her Perthwards was too great is a weird commentary on our museum authorities. Relics that have blazed the track of progress should be preserved at all costs.

### The tender

In 1922 the Adelaide Timber Company made the change from horses to steam power at its Wilga mill. It constructed its own locomotive made from a traction engine using second-hand locomotive driving wheels and, though successful, 'Snorting Liz' was slow. Like *BALLAARAT* it also needed a greater water carrying capacity and the solution was the same – add a tender! The tender was not one specially made for the task but was the old tender from *BALLAARAT* that was brought from Lockeville.<sup>21</sup> Sadly, when the mill closed in 1984 all the 'scrap metal' lying around the site was sold, and this included the tender.<sup>22</sup>

In 1925 the Mayor of Busselton, Mr R Elliot, brought to the notice of Mr McCallum, Minister for Works, that the first locomotive used in WA was lying in Lockeville. The owners made a present of the loco to the Municipality of Busselton, who in turn offered it to the WA Museum. The council had two conditions for the gift to the government: 'that the interesting relic be housed and cared for by the Government and that it shall bear an inscription that it was presented by the people of Busselton and Mr P Reynolds'.<sup>23</sup> (Mr Reynolds was the owner of the land where the locomotive had been abandoned and his property reached to the beach at Lockeville where the original jetty was located.) He also indicated that if the WAGR could find a suitable place to display it then, Busselton would hand over the engine to the Railway Department.

The Commissioner for Railways responded that:

*'If a suitable site were available at the Perth Station it certainly would be an interesting exhibit, particularly in comparison with our later types of engines'. Chief Engineer Ways and Works suggested the location of alongside the pier of the William St overhead bridge*



*BALLAARAT stored at the Midland Workshops.*

*Photo courtesy: Jeff Austin*

*between the main and island platforms at Perth Station. It would then be undercover and could be looked after by the station staff.*<sup>24</sup>

In 1925 when the District Loco Superintendent from Bunbury went to inspect *BALLAARAT* he noted that the tender had been removed — and he could not ascertain where it had gone, yet one assumes that the Shire of Busselton or Mr Reynolds, would have known. As for the locomotive's removal, it was advised that it would need to be carted two miles through heavy sand. A quote of £8 was obtained for this removal but an additional £27 13s 3d was estimated to pay for the labour component of transshipping. This did not include the further cost of preparing the locomotive for exhibition at the Midland Junction Workshops — estimated to be another £150.<sup>25</sup> But on 24 April 1925 the Secretary for Railways gave the instruction to bring the locomotive to the workshops.

### To Midland Junction and Perth

Once an inspection was undertaken at Midland, the estimate of £150 was doubled and so work did not commence. Another report on *BALLAARAT* was prepared, this time by the WAGR Chief Mechanical Engineer, Mr E Evans:

*'The locomotive is in such a dilapidated condition and so many essential parts are missing that will have to be replaced to make it look like a locomotive that it is not altogether possible to lay down a definite estimate for this work until a certain amount of time (and money) is spent to discover the deficiencies. The Workshops Manager, however, advised in July 1925, that to place the boiler on the frame, patch the smokebox and the cab, and renew the missing brasses would – with the necessary painting – absorb fully £150. ... I shall be glad to have instructions on the matter, as we do not want this relic at the Workshops and will be shortly busy with the new locomotives<sup>26</sup> and heavy repairs for the harvest traffic.'*

So on 15 August 1925 the Secretary for Railways wrote to the Busselton town clerk and advised him that 'owing to the very heavy expenditure which would be necessary to fit this locomotive for display purposes it has been decided to abandon this proposal, for the present at all events'. However, he indicated it could be stored at Midland Junction until a more suitable 'resting' place could be found.

But in 1929 the interest in the state's history grew as part of the celebrations for the centenary of its foundation. The Chief Mechanical Engineer was approached by Dr Battye, General Jess and Mr CW Hammond of the State Centenary Committee to allow *BALLAARAT* to be used in the Centenary Celebrations and Pageant. Dr Battye also expressed the opinion that he could probably place the locomotive at the museum upon the conclusion of the celebrations.<sup>27</sup> The Commissioner for Railways supported both of these ideas and presumably a little work, such as placing the boiler on the frame, was undertaken.

The Centenary procession comprised 150 motor vehicles and 15 horse-drawn conveyances and was divided into themed sections. *The West Australian* describes the transport section: 'Introducing it was the first locomotive used in Western Australia. It was made in Ballarat and used in the Vasse District in 1871...'<sup>28</sup> *BALLAARAT* was on one of the horse drawn floats as it passed through the streets. By comparison the first government locomotive, from 1879, was represented by a model as by 1929 it was no longer in existence.

A letter dated 4 November 1929 was sent from Secretary of Premier's Department to Mr Birtwhistle of the *Western Mail* explaining the challenges faced with regard to putting *BALLAARAT* in the WA Museum.<sup>29</sup> Though the railways could send the railway breakdown crane from Midland Junction to Perth to handle the unloading of the locomotive at the



This image, from the *West Australian* newspaper of 3 October 1929, shows BALLAARAT in the Centenary parade on a cart drawn by a team of horses. Some re-assembly had taken place, even if restoration had not.

railway station, the chief difficulty was seen as the handling of the locomotive at the museum. An alternative idea was that the locomotive could be moved by road instead being loaded onto a jinker at Midland Junction Workshops, but again at the museum even primitive equipment was not available. This method of transport would require further money to build a platform and a ramp to the height of the jinker and the roads in the museum grounds were considered to be inadequate to withstand such a load and so the jinker would likely get bogged in sand.

So it seemed that the State Government could not work out how to ensure the relocation of an 8-ton locomotive to the WA Museum. Nevertheless, the Premier's Department promised that they would have it carefully looked after with: 'a view to its preservation until such time as better means can be found for its display.'<sup>30</sup> The Department then wrote to the Secretary for Railways stating that the proposal to move the locomotive to the WA Museum had been abandoned and asked him to make arrangements to preserve the engine to prevent further deterioration whilst another place for its exhibition was found.

### Return to Busselton

Busselton Municipal Council was becoming quite concerned by the on-going lack of progress regarding a new home for BALLAARAT and on 8 March 1934 wrote to the Secretary for Railways asking that 'if the engine is of no more value to your department it is suggested that it is returned to this district where it will be cared for and be of educational interest to the general public.'<sup>31</sup> Contemporary newspaper reports indicate that it was still located at the Midland Junction Workshops.<sup>32</sup>

After referring the matter to the Commissioner for Railways and the Minister it was agreed to return the locomotive to the Busselton district.<sup>33</sup> On 5 April 1934, the Busselton Municipal Council advised the WAGR that it was going into the question of suitably housing the engine and enquired about possible freight concessions for its return. It seems that the engine was in the same condition as when it was sent to Midland, except for the application of a preventative coating to arrest corrosion. As a result of the enquiry the Railways agreed to send the locomotive freight free to Busselton.<sup>34</sup>

But there seemed to be no progress made with regard to the transfer and a Lockeville resident wrote to the *West Australian* newspaper on the matter. The correspondent indicated that

it had been promised that the locomotive would be placed on display at Perth Station. Of interest is his comment that the original set of wheels for the locomotive were worn out and remained at Lockeville.<sup>35</sup> The Secretary for Railways, Mr Tomlinson, was quoted as saying in reply (25 June 1937) that the Railways had received a letter from the Busselton Council saying it was necessary to lay a concrete bed first and that, once provided, the Railways would be notified, but nothing further had been heard from the Council.

The *West Australian* on 7 July 1937 noted that the previous article was referred to at a special meeting of the Busselton Municipal Council. At that meeting it is reported that the mayor spoke of the difficulty in connection with transferring the locomotive from the railway to Victoria Square. It could not be determined whether the locomotive could be moved on its own wheels and 'for various reasons nothing further had been done in the matter'. The outcome was that the Council wrote to the Railway Department to determine its approximate weight, the possibility of its wheels being suitable to allow it to be pulled to the selected site.

On 29 July 1937, by virtue of its then ownership of BALLAARAT, the Secretary for Railways requested more information from the Busselton Council as to future maintenance and location. The Council responded that it would maintain the locomotive in reasonable condition, but were undecided whether this would be by painting or the erection of a shelter. This response was acceptable to the Government and its transfer was approved.<sup>36</sup> (The issue of ownership is not mentioned, though could be considered to be implicit.)

Finally, on Friday 1 October 1937, the locomotive arrived back in the town of Busselton. The Town Clerk accepted delivery of it the following day. On 8 October 1937 the *South-Western News* reported:

*Western Australia's first locomotive – the 'Ballaarat', which has been standing at the Midland Junction Railway yards since being exhibited in Perth during the State's centenary, and which was returned to Busselton last week, was conveyed to its selected site in Victoria Square on Saturday. The handling of the old engine, which weighs in the vicinity of ten tons, presented some difficulty, but its transference to Victoria Square was accomplished with the use of a 40hp caterpillar tractor and a powerful motor truck belonging to Mr Allan Guthrie. The old relic was taken from a truck at the railway ramp and drawn on skids by the tractor to the Kent St crossing. Here some difficulty was experienced as it was feared that the tractor with the heavy load would damage the rails. The old engine was eventually drawn across the line on heavy steel rollers and then dragged along Stanley and Albert Streets to Victoria Square. Some considerable time was taken to get the old relic to its selected site south of the war Memorial, but it was accomplished after much trouble by Mr Guthrie and his men. The transfer of the old engine was watched with keen interest by a number of residents, as considerably ingenuity was required to shift the heavy load.*

Another local paper, the *South-Western Times*, reported on its return but rather than reporting on its arrival in Busselton, focused on the condition of BALLAARAT before the move:

*When viewed at Picton the machine had been cleaned up and some minor repairs effected including the fitting of a new set of wheels and was then in the course of transit to Busselton.*

In an interview Mr Reynolds stated 'that the efficient haulage of the machine was surprising. In comparison with the engine of today this relic used to haul as much and as efficiently as the machines of today.'<sup>37</sup>

Mr Reynolds's affection for BALLAARAT no doubt clouded his judgement about the locomotive power in the state in the 1930s as, whilst some small locomotives were the mainstay of the timber industry, even these would have had a



BALLAARAT 'in Victoria Square, Busselton, c1950s  
Photo: Rail Heritage WA Collection

greater tractive effort than *BALLAARAT*. Also of interest is the report of fitting of a 'new set' of wheels — one set is still clearly marked 1875.

Two years later, in 1939, the Council asked the railways for any information they had about the original colour scheme for the locomotive. In response the railways indicated that the boiler would have been lagged with timber, which was probably varnished or oiled and secured with brass bands. The tender and cab roof were also of timber. They had no record of paint colours but indicated that early WAGR locomotives were black with red lining. However a retired locomotive superintendent suggested when he had seen *BALLAARAT* c1925 it was painted dark green. This appears to be unlikely and it is more probable that its original black paint livery had deteriorated over time.

But this was not to be the end of the questions about *BALLAARAT* and its location. In February 1947 its relocation to the WA Museum was once again discussed. This was brought

about by a letter written on 26 February 1947 by JA Cooke, Acting General Secretary of the Australian Labor Party (ALP) to Premier F Wise.<sup>38</sup> The letter advised that the Great Southern Council of the ALP requests that the first steam locomotive used in WA be placed in the WA Museum. The reason was that 'It was considered that this engine is of historical interest, and it is now lying at Busselton, gradually falling into decay'.

In response to the Premier's Department, the Secretary for Railways recommended that: 'In view of the expense to which the Government has been put to in the past in the transfer of the locomotive to Midland Junction and returning it to Busselton, it is recommended that no action be taken particularly as Museum authorities are reluctant to assist in this matter.'

Dr Battye, Principal Librarian in response to question from Premier's office, stated: 'Although it is a relic of the past, and to that extent, interesting, it is so large an exhibit that there would be great difficulty in housing it, especially as it would suffer rapid deterioration unless it were covered in.'

Hence on 30 April 1947 the General Secretary of the State Executive of the ALP was told:

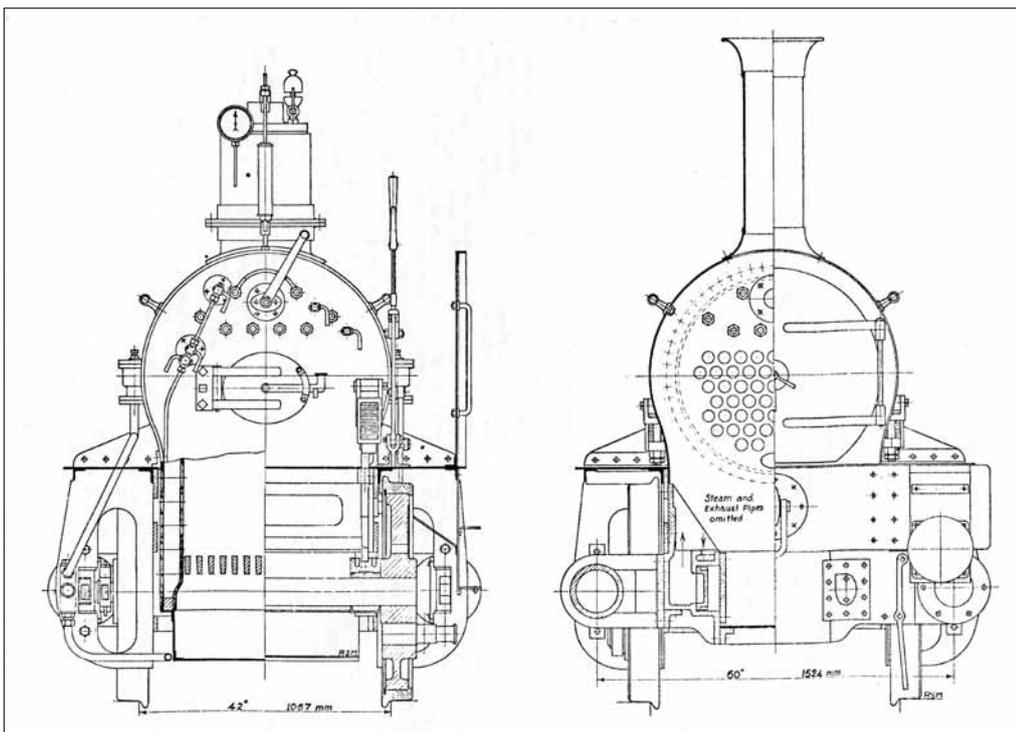
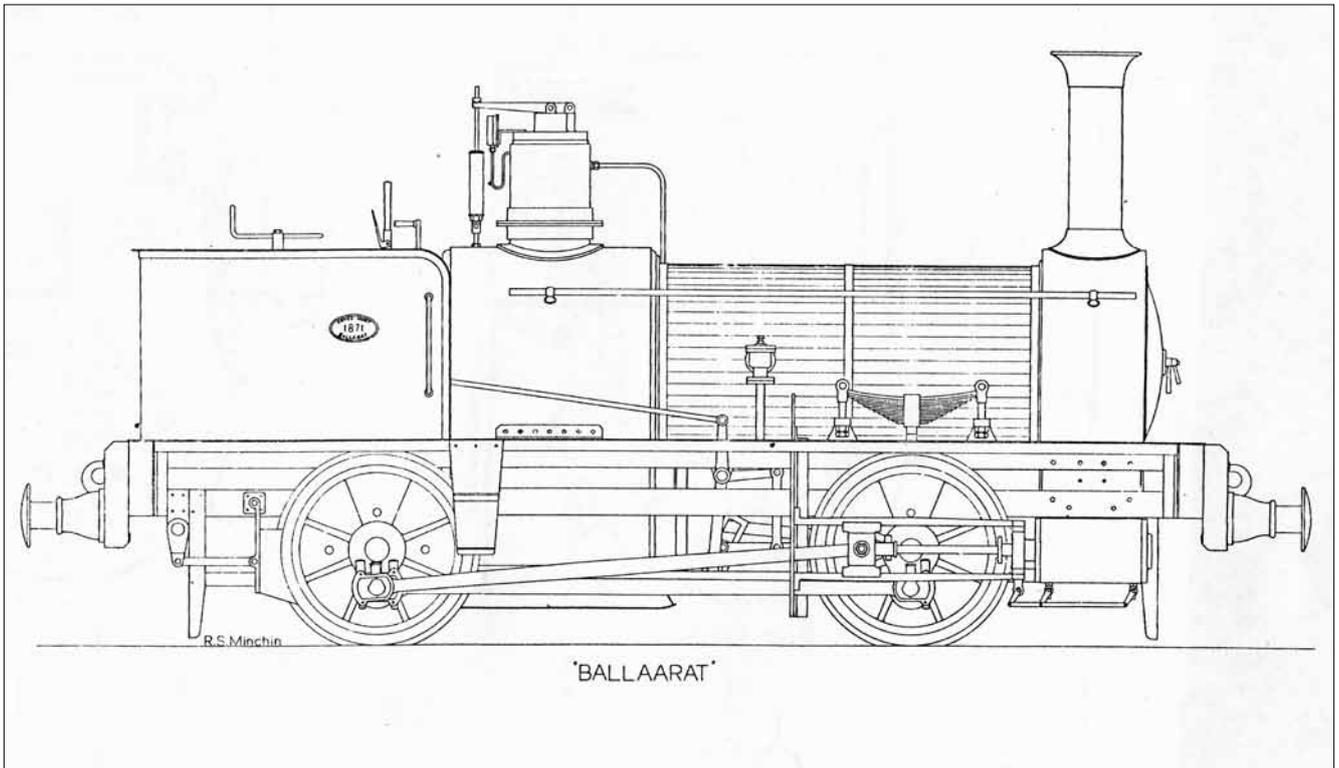
*The museum authorities advise that if the locomotive were transferred to Perth, storage would be a matter of some difficulty and a suitable shed would have to be provided. In view of the existing position regarding building materials, the Government cannot agree at this stage to the erection of such a shed.*

So *BALLAARAT* remained in Victoria Square, Busselton.

Some years later, on 10 November 1963, the Australian Railway Historical Society (WA Division) (ARHS WA) and the Bunbury and Busselton Historical Societies cooperated in a day of celebration at Wonnerup with about 2000 people in attendance.<sup>39</sup> The purpose of the day was to unveil a plaque to commemorate the opening of the state's first railway. Introduced by Mr S Bishop, President of ARHS WA, the Busselton Shire President, Cr F Jolliffe performed the unveiling ceremony. A special mention was made of Mr P Reynolds, who had made *BALLAARAT* available for preservation.



Shelter in the form of a roof was later constructed over *BALLAARAT*. Whilst the fence prevents easy access, children appear to be allowed to play on it — under supervision. January 2011.  
Photo: P Rogers



Front, rear and side elevation drawings of BALLAARAT, as built. Drawn by locomotive engineer Ray Minchin.

**Technical aspects**

The pioneering work in locomotive construction undertaken at Ballarat would no doubt have been influenced by successful designs overseas. Though two locomotives had previously been built in the town, *BALLAARAT* was the first of the 3ft 6in gauge. With its long wheel base and driving axle behind the firebox, the construction reflects features used by the Cumbrian firm of Fletcher, Jennings & Company in their tank locomotive designs. Another characteristic Fletcher, Jennings feature is that of the valve gear being driven by the leading axle instead of the driving axle, using a variety of contemporary link valve gears.

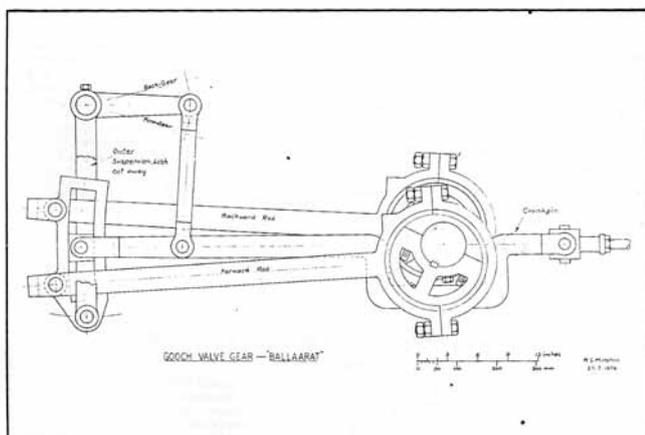
The late Ray Minchin, a Western Australian railway mechanical engineer, described *BALLAARAT* as follows:<sup>40</sup>

*The type of valve gear fitted to BALLAARAT is known as Gooch link motion, developed from the Stephenson link motion by Daniel Gooch, the first locomotive superintendent of the Great Western Railway. Unlike the Stephenson gear, the Gooch reversing link is not lifted for reversing, but is carried on a suspension link which swings about a fixed pivot. Reversing is effected by raising or lowering the die block to which is connected the radius rod.*

*Because the driving axle on BALLAARAT is placed behind the firebox, the two pairs of eccentrics had to be arranged on the leading axle, the reversing links being suspended in front of the firebox.*

Each radius rod, as it reaches forwards to the valve spindle, is guided between its pair of eccentric rods and is cranked downwards to clear the leading axle at the narrow space between the two eccentrics.

Robinson is quite likely to have been influenced by the contemporary products of Fletcher, Jennings as he has, quite understandably, incorporated some elements of these in this design for BALLAARAT.



Drawing by locomotive engineer Ray Minchin, showing Gooch Valve Gear on BALLAARAT.

Original specifications for BALLAARAT, as designed by Mr Jonathon Robinson, general foreman at the Victoria Foundry were:<sup>41</sup>

Rail gauge	3ft 6in	1067mm
Cylinders (2) bore and stroke	7in x 14in	178mm x 356mm
Wheel diameter	3ft	914mm
Wheelbase	8ft 4in	2540mm
Length over buffer beams	16ft 9in	5105mm
Grate area	6 sq ft	0.56 sq m
Working pressure	150lb/sq in	1.03 MPa
Diameter of boiler barrel	2ft 9in	838mm
Height of boiler centre above rail	4ft 6in	1372mm
Heating surface: tubes	190 sq ft	17.65 sq m
firebox	45 sq ft	4.2 sq m
Water capacity	200 gallons	910 litres
Fuel (wood) capacity	1 ton	1 tonne
Total weight (in working order)	10 tons	10.2 tonnes

The safety valve lever from BALLAARAT, as displayed in the Railway Museum, Bassendean, 2011. Photo: P Rogers



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6. Peter Medlin, Locomotives built by the Phoenix Foundry Company of Ballaarat, Victoria, Platina Publications, 1984
7. Buckland J I & Jack W., 'The Locomotive Builders of Ballarat', ARHS Bulletin, Dec 1961, page 186; Palmer, AN, and Stewart, WW, Cavalcade of New Zealand locomotives, Wellington, AH & AW Reed, 1965, pp 15-17. At least 15 locomotives had been built in Australia by the end of 1870, most of them to standard gauge by NSW builders, though the Atlas Company of Engineers in Melbourne built a small 2ft 6in gauge locomotive by February 1871 for Maldon Island in the Pacific.
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9. 'Ballarat Bridge, Vasse Floodgates & Wonnerup Floodgates' - an assessment for Heritage Council of WA page 8 / WA Timber Company, Acc 541, Item 2749, dated 1884. Letter from Director of Public Works to Colonial Secretary, 4 June 1877
10. Gunzburg & Austin, op cit
11. Inquirer newspaper 23 July 1890, Busselton correspondent
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13. WA Museum for old loco for exhibition purposes No. 1878/05, Rail Heritage WA Archives. Note: it was not the first locomotive built in Australia, a myth that was perpetuated in official correspondence for many years.
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*With shiny side tanks, a clean number 7 Perry loco (7967.50.2 of 1952) was photographed during the 1954 season as it neared the top of the range just before crossing what is now the old Bruce Highway.*

*Photo: John Browning collection*

## El Arish days

by Len Heaton

Reading Rod Milne's item in *Light Railways* 221 brought back memories of the El Arish area. I grew up in Silkwood, the next town north of El Arish. During the 1940s, my father was employed by See Poy and Sons, a grocery firm in Silkwood that was a branch of a large Innisfail emporium. Every Monday and Tuesday, Dad would deliver groceries around El Arish. Mondays would see him do the eastern side and part of the township whilst on Tuesdays it would be the western side of the government railway, the remainder of the town and the Jaffa area. During the school holidays I would go with him on these rounds. We would often see locomotive number 8, the Fowler 0-6-0DM (21912 of 1937), around the area. I cannot ever recall seeing a steamie; that's not to say they were never around.

Rod Milne made mention of the spur line just west of the railway crossing at Jaffa running south. I remember in the forties seeing mud wagons on the bridge on this line. They were cane trucks completely boxed in with side-opening doors. Apparently they would be brought up by the locos and placed in position on the bridge so that lorries could back under the bridge and load up with mill mud from the rail wagons. Crude, but one must remember that at that time there was petrol rationing, a "large" truck was one that would carry about three tons, and with the condition of the roads a trip to Tully took well in excess of an hour compared with about 20 minutes today. In 1945 to 1947 I would go to Tully for rural school by train and it would take us 1½ hours if we were lucky.

Forward 10 years, and I went to Tully Mill loco driving in 1955. El Arish was then usually serviced by two locos, two shifts a day. There was no locomotive depot outside the mill at that time. There was a navvies barracks and depot half way up the range on the southern side on Hogans Creek, where there was a loco watering point. The two Perry 0-6-2T locos, 6 (7967.49.1 of 1949) and 7 (7967.50.2 of 1950) were those used. It was at least a 10 hour run with one doing the east side of the loop and the other doing the west. I do not recall them doing the full circle. The drivers at this time were Pat Webley and Merv Rackley on number 6 and Vic Bobbermien and Vic Miller on number 7. They would leave at 8.00-8.30am and arrive home at about 6.00-6.30pm. The afternoon shift would then commence and the locos would arrive home again around 4.00-5.00am.

Halfway through the 1956 season the mill decided to station a diesel in El Arish on three shifts as a trial to see if the transport system could be improved. I was working as the fireman for Les Bunting on the Fowler diesel (which was by then known as the 'Cat' in recognition of its new engine). I had to get my hours up for my diesel driver's ticket. Because I already had a steam driver's ticket, 240 hours was the time required. If the diesel ticket was the first one applied for, 1040 hours were required, the same as a steam ticket. Only basic hours counted; no overtime was accepted, so it needed 26 weeks at 40 hours a week. The crews involved drove up from the mill by car to the 'Range Camp' each shift and worked from there.

At Meade's triangle (the site of today's El Arish navy depot) a farmer named Pantovic also had the BP fuel depot, so this was where we initially fuelled the locomotive. We used a petrol powered pump to fuel out of 44 gallon drums.

The trial must have satisfied the powers-that-be because, the following year, three crews were stationed in the area and the Range Camp was our depot. Prior to the start of that season, loops at the southern foot of the range at Djarawong were constructed for storage. We were given the Clyde 0-6-0DH number 9 (DHI.4 of 1954) to use. There was Les Bunting and his fireman Don Blair, Dinny Hogan (Hogans Branch family) with a fireman (whose name I do not recall), and me with David Benn as my fireman. His father was one of the original soldier settlers on Granadilla Road and had served in the artillery in France during the first war.

Although there were variations because of derailments, lack of empties and other misfortunes, the normal operations were basically as follows. Commencing at 8.00am the loco would be at the Camp with a rake of empties. We would deliver the empties on the eastern side as far as Hogans branch and Sandersons branch. The latter branch only just crossed the Bruce Highway in those days, so it was actually shorter than Hogans branch. We would then head back gathering fulls until we had a load of between 80 and 90 trucks, our limit at that time. We would haul the load until we crossed Maria Creek on the way up the range and came to 'Kelly's Flat'. Here we would leave 60 fulls (our maximum load up the range with both the Clyde and Cat) and take the remainder to the top of the range. Just on the eastern side of the bridge where we crossed over the QGR line was a short dead end siding, and here we would leave this overload. We returned back down the hill to get the remaining 60 and haul them up to the top. Once here, we would reattach the first load and then take the lot down the hill to the Djarawong loops at the bottom. We had no trouble holding this large rake down the grade as it was not very steep. There would be a rake of empties waiting for us so these would be attached and we would then head



back up the hill and have a meal break at the Camp. After our break we would go and do the western side in a similar fashion, with another 80 to 90 taken over the hill by 4.00pm and knock off time.



*John Fowler 0-6-0DM 8 (21912 of 1937) was re-engined with a Caterpillar diesel in 1950 and was thereafter known as 'the Cat'. Here it has hauled its rake across Kelly's flat and is commencing its ascent of the range.*

*Photo: Len Heaton*



*Heading up the range, the driver continually looks back to check that the rake is intact. The taut chains hold down the cane and stop it slipping sideways off the trucks.* Photo: Len Heaton

At the start of afternoon shift we might not have any empties so we would go straight to the last loading point on the eastern side and commence clearing out all sidings as we headed back towards the mill until we made up a full load. But this load was only taken as far as Parkers, the start of what is now known as Barbagallos branch. Parkers branch just went across Friday Pocket road and ran alongside it to the west. The load would be left there. If, however, there was someone harvesting on that branch their fulls would be cleared prior to backing the load in so that we did not have to shift the entire load just to get at a few fulls.

We would then go back and continue clearing out sidings but this time when we had a full load we would do the run over the range. By now there would be empties waiting at Djarawong and we would head back with them to the Camp for a meal break. We would then deliver the empties on the eastern side, starting from a siding that allowed us to deliver to all the furthest sidings. This time we would go around the circle across the catch points at Jaffa, clean out the western side of fulls, and take them over the mountain. Again there would be empties waiting. Whilst we were limited to 60 fulls over the range there was no limit to empties and we regularly had 120 or 140 per load. We would attach the empties and head up to the Camp and finish the shift.

Night shift would deliver these empties to the field. Usually, this rake was sufficient to give everyone the initial deliveries for the start of the next day's loading. Once this task was completed, the rake of fulls that had been left in Parkers branch on afternoon shift was collected and taken over the mountain. It would still be only 3.00 or 4.00am so instead of being left at Djarawong the load would be taken through to the mill, usually arriving about 5.30 or 6.00am. There the crew would pick up the first of the day shift empties and head back for the 'hills' usually arriving back at Range Camp just before finishing time.

And then it started all over again. Unless there was something very unusual happening, the traffic officers would just give us the list of empties for each grower at the start of the shift and left us to our own devices, as long as the work was carried out properly. Remember there were no two-way radios then. There was one phone at the Range Camp and one at Meades Triangle which we used for safety reasons to check before heading up the range.



*Clyde 0-6-0DH 9 (DHL 4 of 1954) crosses the Hogan's Creek bridge with a full rake. The photographer is standing at the old Range Camp depot.* Photo: Len Heaton



*Coming up the range just past the crossing of the highway and someone has left the points set the wrong way for Clyde number 9. Photo: Len Heaton*

I only spent one year in this area as in 1958 I was fortunate to obtain a position at Mourilyan Mill as an assistant cane inspector – but that’s another story.

Just two incidents at El Arish come readily to mind. One night when on night shift I headed north down the range with a rake of empties and when I got to Meade’s triangle I saw sparks galore coming out from underneath the loco on the driver’s side. We were traveling in reverse at the time. After an examination I found that the tyre on the front driver’s side wheel had moved and was rubbing on the frame. After contacting the mill I pushed my load up the back leg of the triangle and drove the loco slowly back up to the Camp. There I got one of the Malcolm Moore locos used on the navvies’ transport train and headed back to deliver my empties. At that time these small ex-Australian Army locos still had the old Ford V8 petrol engines and 4-speed gearboxes. When I attached my approximately 140 empties I was scarcely able to get the old girl out of second gear, but we eventually got our empties delivered. I have seen those engines worked so hard that each cylinder bank was red hot. That is why their average engine life was six months. After they were fitted with Fordson diesel tractor engines they were useless for hauling any large loads.

Another day during a hot and dry period towards the end of the year, I was taking a load down the range and when we got to the bottom I was to back the load into a farmer’s branch. I backed in and stopped and the fireman chocked the rake. When I moved away slightly to make sure that the trucks did not move, I suddenly noticed a fire between the rails in the dead grass behind the loco. I looked around to see flames coming from under the bonnet. The machine was on fire. Panic stations! I could not get the fire extinguisher to work so I was telling the fireman to run to the nearest farmhouse about a mile away to ring for the fire brigade

when the extinguisher decided to go and I got the fire out. What had happened was that due to the dry weather there was a buildup of very fine grass on the top of the brake blocks and the heating of the brakes coming down the hill caused the grass to ignite and this in turn set alight fuel that had overflowed from the tank above.

Following this incident, larger extinguishers were put on the loco, the brake blocks were changed from cast iron to composite ones, and daily cleaning of the rubbish from the brake blocks and more positive cleaning of the locomotive, as well as greater care to avoid overfilling of the fuel tanks, was instituted.

I hope this gives a bit of an insider’s view of the sugar tramways in those earlier days.



*No one likes to see loaded trucks in the gully but the first priority is to make sure the line is clear for more cane to go through to the mill.*

*Photo: Len Heaton*

# F&M Baldwin Engineering 1993-2004

by Craig Wilson

## The parting

The merger in Germany of the holding companies of Westfalia and Klocker Becorit had inevitable consequences beyond the forming of their Australian interests into a single company, Westfalia Becorit Pty Ltd. There was an instruction for a reduction of employee numbers to realise the merger benefit at a time that coincided with a downturn in orders for the Australian company.

The staff reduction took place in December 1992. Since Westfalia's purchase of EM Baldwin & Sons Pty Limited, Frank and Maurice Baldwin had been employed as full time consultants, and they were among those retrenched. Frank Baldwin left on 11 December 1992 and Maurice Baldwin, working on an engine package for Mines Department approval, in the first months of 1993.

The departure of the Baldwin brothers did not reflect a withdrawal from either the canefield or flameproof locomotive market by Westfalia Becorit. The combined company had established its own record in these markets with the design and construction of new product. The knowledge now transferred, it seemed the need for assistance was no longer there. It was assumed that both men would now retire. Those knowing the brothers would have realised that such an assumption was not necessarily well founded.

There was little surprise when in 1993 the two brothers formed a partnership, F&M Baldwin Engineering, to service the sugar industry. One of the strengths of the Baldwin business with the Queensland sugar mills was the amount of contact between mill staff and Frank Baldwin. Over three decades he had cultivated contacts at most of the mills. Even

through the years of Baldwins' exclusion from the market, these men were often on the telephone discussing problems and asking about innovations. So the new partnership had a potential customer base already in contact.

The partnership had its office at Frank Baldwin's house in Cecil Avenue, Castle Hill. Work on the assembly of smaller equipment could take place there, though anything of size would require larger facilities. But before such facilities were needed, orders were required.

## Brake wagon bogies

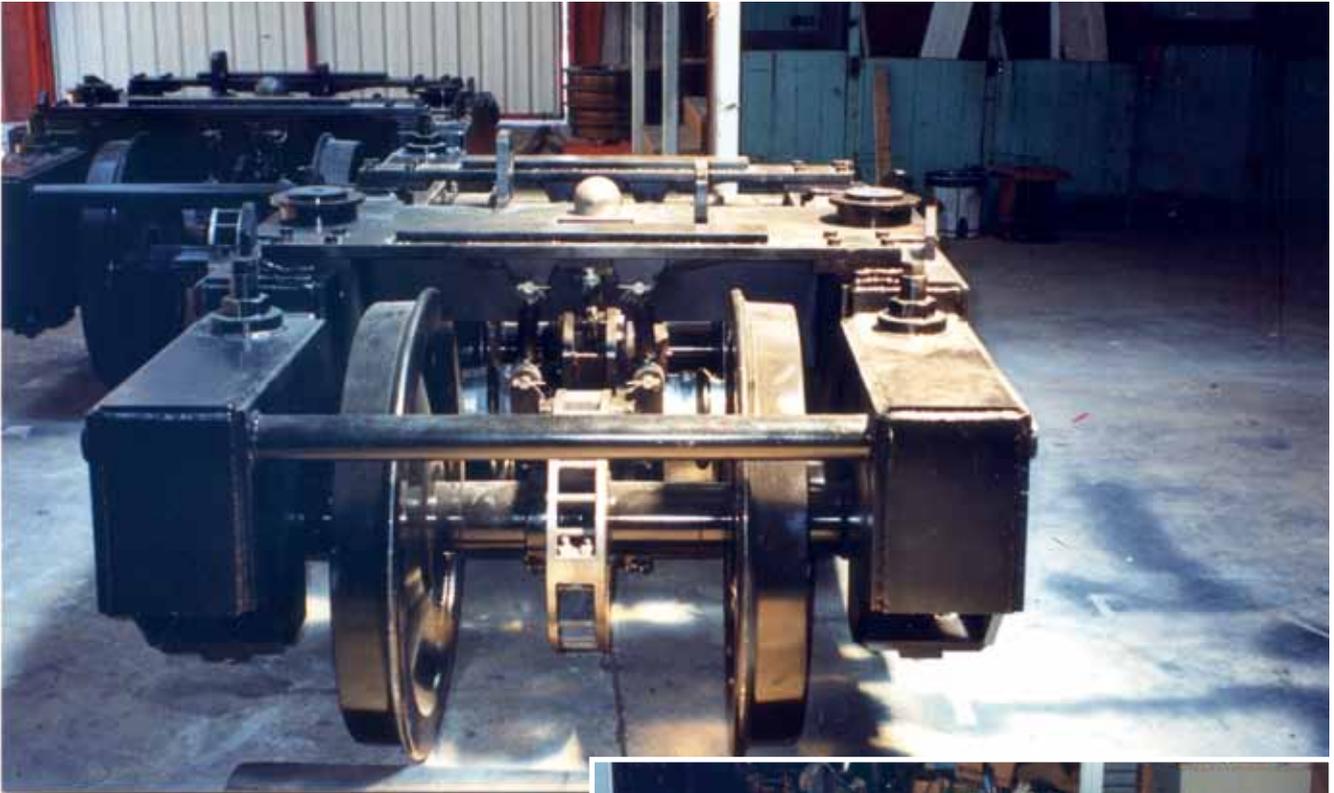
The canefield railway market in the early 1990s enjoyed a degree of revival with all three locomotive manufacturers, Eimco, Bundaberg Foundry and Westfalia, taking orders. However it was to be a brittle recovery. The cost of new locomotives was rapidly approaching a seven-figure sum, and while this new generation locomotive was demonstrably an advance on its predecessors many of the mill managements could not justify the capital cost. This changed attitude flowed through to other purchases too. Parts life was now given greater scrutiny, and cost savings through upgrades sought. In short, budgets had tightened.

Remote-controlled brake wagons had been pioneered by Clyde and Commonwealth Engineering before the Baldwin sales push had shouldered them aside in the mid-seventies. Baldwin had been responsible for the next innovation, designing a bogie brake wagon using disc brakes, with Isis Mill ordering the first. Following the purchase of the Baldwin licence from the Receiver in 1985, Hexham Engineering had built this brake wagon the following year, with another one for Isis in 1987. In the period since, there had been no commercial examples constructed, with mills generally resorting to modifying locomotive frames for the purpose.

In 1991, Westfalia had supplied, with *STRATHALBYN*, a set of bogies for a brake wagon that was constructed at Invicta Mill. These were quite massive and took the brake wagon concept one step further with the inclusion of an



*Invicta Mill's Westfalia B-B DH STRATHALBYN hauls a loaded train to the mill on 28 September 2006. A set of bogies came with this locomotive for Invicta to build a brake wagon. Its success inspired further orders, which the Baldwin brothers were happy to fill. Photo: Matt Green*



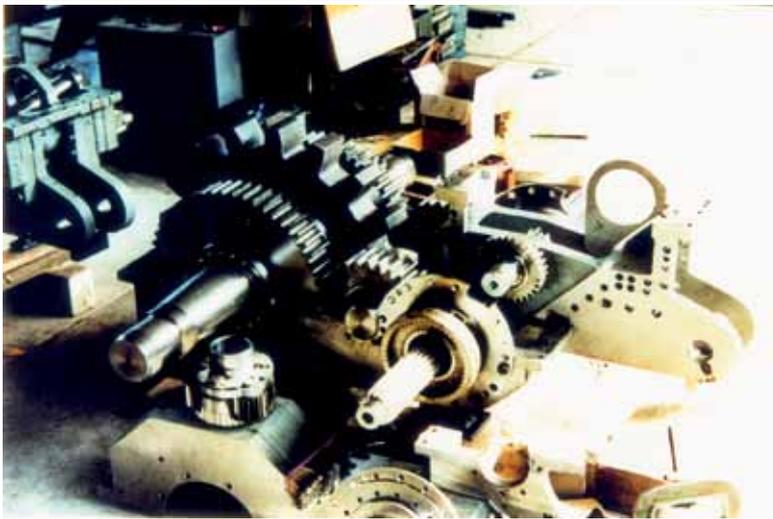
**Above:** The first set of brake wagon bogies for Invicta Mill at Kings Park in 1993. The disc brakes can be clearly seen. Photo: FE Baldwin

**Right:** A completed driving axle assembly for an 8-ton locomotive mounted in its cradle and with transfer case attached. The relative smallness of the final drives can be seen in comparison to the planetary hubs. Photo: FE Baldwin



**Below:** Frank Baldwin working on DL 1 on 13 February 1994. The larger of the two tanks in front of the cab is for water for the scrubber while the smaller is the fuel tank. Photo: Craig Wilson





**Above:** Late in the afternoon of 13 February 1994 the first of the locomotives built by the partnership was tested. On hand (L-R) are Frank Baldwin, Brian Watts and Maurice Baldwin. Also present were Stewart Baldwin and the author. Photo: Craig Wilson

**Left:** The final drive unit for the 12 ton locomotive partially assembled. The picture is taken from the rack side with the rack drive bull gear closest on the rear axle. The adjacent shaft carries idler gears. Next to it are rack side idler gears and on the far side the traction idler gear. The final visible shaft formed part of the Clark clutch pack assembly. Not visible due to its being located in the top cover assembly is the shaft and gearing powered by the Rexroth hydraulic motor. Photo: FE Baldwin

**Below:** The rack locomotive under construction in February 1995. Photo: Craig Wilson



air suspension and dump brakes. If this first brake wagon proved effective, Invicta Mill with its long hauls and heavy loads would require more brake wagons to fully equip its locomotive fleet.

This eventuated, and the Invicta management required additional brake wagons to pair with its existing bogie locomotives as well as the further high-power locomotives it planned to acquire in the next few years.

In 1993 Frank Baldwin was aware of this policy through Jeff Haig at Invicta Mill and put forward a suitable bogie design. It was a return to simplicity after the Westfalia designed bogies. The dump brake addition had not been successful and was not required. Much less massive as a consequence, the bogie reverted to the use of traditional hornguides with a spring suspension. Mounted on each axle was a mild steel brake disc with centrally mounted truck type brake cylinders. The Baldwin partnership was given a contract for a single set of bogies for delivery in 1993.

To build this equipment a larger workshop area was required. Kless Engineering Pty Ltd, run by Stanford Baldwin's sons, was then located in a factory module in Binney Avenue, Kings Park. A vacant smaller module was available next door. With Kless nearby, tools were on hand, deliveries could be taken, and on occasion assistance given. The first set of bogies was delivered in 1993. Invicta Mill purchased a further seven sets over the next three years. In 1995, there was also a second mill in the market for bogies and a set was supplied to Mulgrave Central Mill Co for their Mulgrave Mill.<sup>1</sup>

### Eight-ton locomotives

Over the years Frank Baldwin often discussed the building of new canefield locomotives with mill engineers. His knowledge of costs and specifications were updated from time to time when providing budget quotes to mills, but he was the first to admit that he would have to consider long and hard before seriously entertaining such a project.

As it was, his opportunity to build much more modest locomotives came with a tunnelling project at Lawson in the Blue Mountains to the west of Sydney. Here a joint venture between McConnell Dowell Australia Pty Ltd and Obayashi was constructing two sewerage tunnels and an associated pumping station. The longer tunnel was 16.3 kilometres westward to North Katoomba while a second 3.2 kilometre tunnel went in a northerly direction to Hazelwood where it linked up with an already completed tunnel. Rail was potentially to be used in both tunnels for the movement of men and materials, as well as the carrying of concrete where either tunnel required lining. McConnell Dowell, the constructing company in the joint venture, had at its disposal much of the rail equipment required except for appropriate locomotives.

Frank Baldwin heard of their interest and approached them to discuss their requirements. He recalls that the brief was to design and propose a suitable locomotive with major constraints imposed on height and width.<sup>2</sup> This limitation was required as initially the locomotives were to work in the limited clearances provided by the Dixon conveyor behind the tunnel-boring machine. The proposal by the partnership for two eight-ton locomotives was accepted in 1993 and construction commenced immediately at Kings Park.

After the closure of the Castle Hill Works, it was one of the features of the rail equipment produced under the control of Frank Baldwin that it was continually re-evaluated and redesigned. It may have been easier to revert to the previous solutions but, with the pressure of the constant flow of orders

gone, there was time now to innovate. So it was with these locomotives, the general features of which were:<sup>3</sup>

<b>Locomotive model</b>	FMB 8T 294
<b>Engine</b>	Perkins 1006-6T turbocharged diesel of 180BHP s/n YB 30653U570700X
<b>Engine</b>	Perkins 1004-4T turbocharged diesel of 113BHP @ 2600RPM
<b>Loco DL 1</b>	Engine s/n AB 30550 U589 145W
<b>Loco DL 2</b>	Engine s/n AB 30550 U589 144W
<b>Transmission</b>	Clark 18000 series, model 116HR 18302 MA three-speed forward and reverse with only two used. Low gear 8 kph. High gear 18 kph.
<b>Drive shaft</b>	Hardie Spicer mechanics 5c
<b>Transfer gearbox</b>	F&M Baldwin
<b>Final drive</b>	F&M Baldwin spur gear and spiral bevel gear
<b>Exhaust system</b>	Catalytic exhaust purifier followed by a water scrubber exhaust conditioner
<b>Dimensions<sup>4</sup></b>	
<b>Height</b>	1,620mm
<b>Width</b>	1,180mm
<b>Length</b>	3,810mm
<b>Wheel base</b>	1,380mm
<b>Gauge</b>	610mm
<b>Wheel diameter</b>	610mm

This bare specification gives no indication of the design changes made. To get the appropriate gear ratio, the axle drive was too large to fit within the design constraints given. Frank Baldwin decided to use planetary gearing in the axle hubs. He recalled that having looked at the available components that could be bought in, there were many reasons for a different approach to the axle drives.

*I'd seen in my visit to the Plymouth Locomotive Works in America that they were taking – mind you it was on wider track – standard Clark (axles) and using bolt on wheels. I used the components out of British Leyland hub reduction axle drives. They had a comparatively small crown wheel and you've got a four to one reduction in the hub itself. Of course I wanted to slow them down and I had to put a transfer box on that (to) take it from the transmission.<sup>5</sup>*

The assembly of the locomotives was completed in early February 1994 with the testing of the first locomotive, DL 1, taking place on the afternoon of 13 February 1994 and delivery to Lawson planned for two days later.<sup>6</sup> The second locomotive, DL 2, was delivered on 25 February 1994.<sup>7</sup>

As the most powerful locomotives on site they saw intensive service on the tunnel to North Katoomba, which by this time was well advanced. Ultimately they were doing three trips to the face each shift, on three shifts per day six days a week. The major design problem arising during their initial operation was excessive pitching which was put down to the rubber suspension and their compact design. This was reduced by moving to the headstocks ballast weights that had been centrally mounted.<sup>8</sup>

### A twelve-ton locomotive

The two eight-ton locomotives were far from the end of the partnership's involvement with the Lawson project. There was to be the second tunnel to Hazelbrook, to be commenced on the completion of the boring of the first. The problem for the contractor was in deciding on the most economic method of boring it. It left the site approximately eighty feet below the level at which the tunnel to North Katoomba, with its construction railway, entered the site.



**Above:** On 15 March 1995 the 12-ton locomotive was loaded for delivery to Lawson. Photo: David Jehan, Craig Wilson collection

**Left:** The partnership also supplied the rack rail and the two rack entry sections. The entry sections are pictured at Kings Park on 26 February 1995. Photo: Craig Wilson

**Below:** The 12-ton locomotive in the servicing area at the Lawson construction site on 2 July 1995. Photo: Craig Wilson



A number of alternatives were considered to deal with the height difference. Using rubber-tyred equipment and a road header was one solution, but it would require a large amount of additional plant to bore the relatively short tunnel. Another was to use the existing rail equipment together with a rope haulage located at the construction site. To install a rope haulage, a large rock excavation would have been required as well as purchase of the rope haulage equipment. The final option considered was the use of rail with rack haulage on the decline to the relatively flat remaining section of the tunnel. This required a rack/adhesion locomotive and rack rail.<sup>9</sup>

To the credit of the contractors' staff this decision was not deferred, with any delay likely to rule out the rack option due to time constraints. The partnership submitted a quotation and simplified general arrangement by October 1993. While the detailed design had not taken place, most of the features had been sketched out. At least with the spoil removal completed by the time of the new locomotive's delivery, the restrictive dimensions imposed on the first locomotives could be relaxed. Frank Baldwin in discussion on the design said:

*They've given me a little bit wider, only a little bit. One hundred millimetres higher and seventy-five wider. I said "What about length?". They said, "We don't mind." I've gone up from 1,200 (mm) from the head of the axles to the headplates to 1,500 (mm) I think.<sup>10</sup>*

The locomotive was designed to run on a 1 in 6 grade (though the customer, until convinced, had wanted 1 in 4) and to operate safely required greater power and weight than the eight-ton locomotives. It would have a hydrostatic transmission with Rexroth equipment, reflecting the earlier success of this equipment in the rack locomotives built at Rooty Hill.

The drive for the rack pinion located on each axle was the most difficult part of the design. The gearbox driving both the axles and the rack pinion was elongated, and straddled the rack pinion and drive axles. Adding to the complexity (and the safety) was the inclusion of dump brakes and two features that were seen as required improvements on the two eight ton locomotives. For enhanced maintenance access, the fuel, water and hydraulic oil tanks were designed for easy removal, perhaps a small change but one that had become a sore point with the Lawson fitters working in the cramped spaces on the eight ton locomotives. Oil enclosed disc brakes were fitted instead of the conventional shoe brakes that had been changed weekly on the earlier locomotives.

On a cost basis the choice was for the installation of rack haulage. While success in the rack operation of the proposed locomotive was critical, the contractor only anticipated a short period of use in this manner. The rack section would not be laid until the tunnel-boring machine moved beyond the decline and its use would cease when the break through took place at Hazelbrook.

Thereafter men and supplies were to use that access point, and the equipment was to be recovered from there. During and following the period it would be required for use on the decline, the locomotive could also be used on the North Katoomba tunnel.<sup>11</sup>

Work commenced immediately on the design of the locomotive. As can be imagined it was not an easy task in several areas, but as Frank Baldwin said:

*... that was the challenging thing to do because in the space of nineteen inches I had to virtually get two final drives (in), one solid to the axle and the other one to the rack wheel which is running on bearings over the axle. I know I stared for a week at a blank piece of paper before I decided which way I had to go. Because we'd approached the hydraulics people - it's hydrostatic drive - and they'd looked at it,*

*taken the wheel diameter and said, "You will need an overall ratio of such and such." That's where the problem came in and the gearbox was longish, fairly narrow and standing up at one end. You've got the input for the hydraulic motors and also the hydraulic clutching for accepting the wheel drive or rack drive. I use clutch kits out of Clark transmissions. The rest of the gearbox we made ourselves. What helped me overcome the problem was (that) on the primary shaft once again I put planetary hub reductions which gave me a four to one advantage. They were identical to the others. They work all right and of course on the outside of those they (have) hydraulic braking, clutch disc braking. I had the drawings ready for manufacture in about three weeks. It flowed pretty well. You had the hydraulic motor driving the input shaft that went down over two clutch banks, and one clutch bank drove the rack wheel (and) the other clutch bank drove (the axle final drive). And then there were the hydraulic hoses. There was such a conglomeration of hosing. It was an absolute nightmare and the hoses were high-pressure stuff up to 5,000 psi. That was the difficult part with hosing it because you had all your drain back hoses, all your returns to the tank and your filtering lines. That part of the job was nigh impossible, (it) made me cranky.<sup>12</sup>*

The general features of the locomotive, as built, were:<sup>13</sup>

<b>Locomotive model</b>	FMB 12TRA 295
<b>Engine</b>	Perkins 1006-6T turbocharged diesel of 180BHP s/n YB 30653U570700X
<b>Transmission</b>	Hydrostatic Rexroth/Baldwin using Rexroth variable displacement pump, model A10V2 driving hydraulic motors mounted on the two gearboxes. Adhesion drive speed 6 kph. Rack gear drive 18 kph.
<b>Final drive</b>	F&M Baldwin spur gear and spur gear drives.
<b>Exhaust system</b>	Johnson Matthey Catalytic exhaust gas purifier, model DEP-180E-76 followed by a water scrubber exhaust conditioner
<b>Dimensions</b>	
<b>Height</b>	1,670mm
<b>Width</b>	1,175mm
<b>Length</b>	5,110mm
<b>Wheel base</b>	1,940mm
<b>Gauge</b>	610mm
<b>Wheel diameter</b>	610mm

The components of the locomotive were progressively delivered over the final months of 1994 with the final erection proceeding in February 1995 and delivery to Lawson on 15 March 1995.<sup>14</sup> It had been delayed two days due to a gearbox oil pump failure. This problem reasserted itself on arrival and it was returned to Kings Park for repairs.

It entered service on the North Katoomba Tunnel construction, with the rack section not being brought into service until May that year. Use on the rack lasted approximately seven weeks, and the locomotive then returned to service on the North Katoomba Tunnel which was being progressively lined, where required, and the rail withdrawn.

### Other Lawson work

There was a further locomotive that the partnership had an involvement in. One Sunday night the author received a telephone call from Maurice Baldwin. McConnell Dowell was looking for additional locomotive power. Was I aware of any that might be available? One of the locomotives discussed was the Baldwin locomotive (serial 6008.1 6.75)<sup>15</sup> stored underground at the Long Tunnel Extended Tourist Mine at Walhalla in Victoria. A visit was made to evaluate the condition of the locomotive and an offer made on behalf of the contractor. The sale was agreed to, and in November 1994 Maurice Baldwin traveled again to Walhalla to transport the locomotive north.



DL 3 at Lawson after installation of a new Deutz engine.

Photo: Craig Wilson

Surprisingly to those that had seen the conditions under which the locomotive was stored, after fitting of a new alternator it was powered up and driven to the surface. From there it went via Melbourne direct to Lawson where it entered service as DL 3. However the existing Bedford motor proved unsatisfactory and the decision was taken to replace it with a Deutz motor.

The partnership was offered the contract to do the conversion, but by this time they were fully occupied in completing the rack locomotive. Frank Baldwin did do the design work in matching the new motor to the transmission and did the drawings to fit the motor to the frame at a 7-degree slant.<sup>16</sup> The contractor at Lawson did the conversion work.

### Further locomotive work

The last work on a locomotive came in 1998. Dick Smith had built a two foot gauge railway at his property near Canberra. He was seeking an internal combustion locomotive to operate on the railway and made contact with Frank

Baldwin who offered a quotation to construct a locomotive at Kings Park.<sup>17</sup> However, Dick Smith chose to purchase a second-hand Plymouth locomotive (S/n 6656 of 1968) in America.<sup>18</sup> This locomotive had been built to 3ft gauge and, while complete, was not operable.

The partnership regauged the locomotive to 2ft gauge with the necessary brake layout changes, replaced equipment such as the water pump and radiator, added headlights and gave it a repaint.<sup>19</sup>

### Disc brake kits

The partnership also supplied original equipment to other manufacturers. This particular product started like many other jobs with a discussion with a mill engineer. The mill engineer at Pleystowe had been given the project of rebuilding for service on 2ft gauge the first of their ex-NSWGR 73 class standard gauge diesel hydraulic locomotives. Looking at the proposed specification he recalled the application of disc brakes to the Isis Mill bogie brake vans. Could something similar be done for his locomotive?

It could. A kit was designed and the first one installed in WALKERSTON, which entered service in 1994.<sup>20</sup> Frank Baldwin described the kit thus:

All the components except for the disc are the same for the brake wagons as the locomotive brakes. But because they have enormous universal joints in these Walkers locomotives we had to increase the diameter of the disc to 535 mm to allow us to bring the pad holders out far enough so the inside of them cleared the universal joint. And of course they don't have to be a split disc. They put the eight bolts on to hold the universal. What they've done is they've put a spacer straight on to the pinion shaft flange. Then they've put the disc on, then the universal joint and by putting (in) the spacer they allow the braking to come out past the diameter of the wheels.<sup>21</sup>

Unhappily it was a solution that could not be applied to the ex-QGR Walkers locomotives then also being converted for mill use because their bogie wheelbase was too short.<sup>22</sup> However that still left a fair number of potential sales. A number of mills, like Invicta,<sup>23</sup> specified the use of the brake kit in their conversions, and the two major re-builders, Bundaberg Foundry and Walkers, were purchasers over a number of years.



The Plymouth 4wPH locomotive, refurbished by F&M Baldwin, on Dick Smith's Bowylie Light Railway, October 1998. Photo: Richard Youl

## Final drive rebuilds

Perhaps surprisingly the last source of work to come to the partnership was the rebuilding of axle final drives. The first contract was for the redesign and replacement of the final drives on Inkerman Mill's *IONA* (EMB serial 4498.1 7.72) late in 1995. Previously named *KILRIE* at Kalamia Mill, *IONA* was still fitted with model AD4 final drives incorporating the 16 inch Eaton crown wheel. These had been modified at least once at Castle Hill on Job 6249 in 1975, but 20 years later were still otherwise an original design. This contract allowed for the full replacement of the final drives and axles so Frank Baldwin had a free hand in ensuring a robust design.

*The whole design was new (with) a 19 inch crown wheel. That's all you can get on a 28 inch wheel and still have some clearance. But I suppose I just based the design on what I'd learned over the years, and what I've learned is keep right away from tapered roller bearings where you can. So the side bearings on this one are far easier to assemble because they're spherical roller bearings – big fellas. I did the design. I took it to FAG. They did all the calculations. They had no problems. I put a very large roller bearing on the nose of the pinion. Not the silly little things like that come on trucks – and I made it so that it was easy to get apart. I increased the size of the inter-axle universal joints. The biggest we'd ever used were Twin Disc 480's. You can't get Twin Disc any more. We used 10C and the only tapered roller bearings you've got in it are (on) the input pinion and the idler gear to get the height above the input. It would be nice to get a wheel big enough there but you can't. So you put a moderate sized wheel and you put an idler in. It worked all right. But there are no helical gears in it which means the side thrust on the bearings is no longer present. So far they've worked very, very well.*<sup>24</sup>

There was another customer at this time for final drive rebuilds. Proserpine Mill rostered two Baldwin bogie locomotives and requested a quotation to refurbish a single set of bogies. That quotation was accepted and work was commenced. The mill staff must have thought the price was right, as almost immediately the request was to do the final drives for the second bogie locomotive.<sup>25</sup>

Inkerman Mill also had on its roster another Baldwin bogie locomotive, *IYAH*, (EMB 6558.1 6.76) delivered new to the mill, and fitted with AD5 final drives. The model AD5 was designed around a bull wheel and crown wheel gears, and when first issued on locomotives constructed in 1975 and 1976 had problems such that the majority of the axle drives were replaced under warranty by AD6 or AD6A final drives over the next two years. However, not all were replaced, with four locomotives continuing in service with the AD5 final drives. As one of those remaining locomotives, when approached Frank Baldwin sought to have the final drives replaced with the new design. Surprisingly, after using it with success on *IONA*, the mill management had different ideas.

*They asked us to rebuild it. They didn't want us to change the final drives. I just caved in. I knew that the problem that they were having with them was the fact that the bull wheel pinion and the bull wheel itself were on tapered roller bearings. Due to the fact that it is almost impossible to gaff anything after they've run awhile to check their adjustment against the pinion running on the bull wheel, (it) is running skewed. Of course that chews the edge of the bull wheel off - and the pinion. So I had to look at the design and put in self-aligning bearings. I altered the pinions so that the two tapered roller bearings would take the thrust of the crown wheel, which is on the bull wheel pinion back to back. So you couldn't get very far out there - even if it got loose - and I put a plain sealed cylindrical bearing on the other end of the shaft.*<sup>26</sup>

The final drives for *IYAH* were completed at Castle Hill in the final months of 2000 ready for the 2001 season.<sup>27</sup>

Inkerman Mill had a third bogie locomotive, *BOJACK* (EMB serial 7280.1 9.77). *BOJACK*, previously named *SEAFORTH* on the Kalamia roster, was fitted with later model AD6 final drives incorporating an 18 inch Eaton crown wheel. Apart from the age factor these had operated successfully. The request from the mill staff was for simple refurbishment. Frank Baldwin described the process.

*We pulled the wheels off, stripped the gearboxes off, checked the components there, checked the axles for cracks and all that kind of thing. Make sure the bearings aren't slipping in the housings. Build them up or re-machine them if necessary and send them back for another ten years hopefully.*<sup>28</sup> The overhauled final drives were returned to the mill in February 2001.

## A strategic partnership

On 25 July 2003 on the Waterson line to the west of Proserpine Mill, Baldwin bogie locomotives 9 and 10 had a head on collision and as a result were extensively damaged. Their repair for the 2004 season became an insurance job, one that was too extensive for the two Baldwin brothers to contemplate.

However, a more suitable option was available. On leaving Rooty Hill, Steve Lewry had set up business as ONTRAK Mining Services Pty Ltd and serviced most of the collieries still using diesel rail transport. He had the facilities to undertake the frame repairs and was interested in supplementing the declining mining rail work with canefield work. ONTRAK bid for and gained the contract to rebuild the two locomotives with F&M Baldwin Engineering given the subcontract for repair of the two reversing boxes. On both, the main plates had been dished by the impact, with damage to the internal shafting. This work was to be completed in 2004 and at the time of writing brings the partnership's work up to date.

*Craig concluded his series of articles here. This final piece was submitted on 26 January, 2004. He died just two days later.*

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# Industrial Railway NEWS

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## QUEENSLAND

### **BUNDABERG SUGAR LTD, Millaquin Mill**

(see LR 220 p.26)

610mm gauge

In early January, three EM Baldwin B-B DH locomotives were outside the shed with bogies removed for final drive maintenance, *VULCAN*

(5317.1 11.73 of 1973), *CALAVOS* (4983.1.7.73 of 1973) and *FAIRYDALE* (10048.1 6.82 of 1982). *FAIRYDALE* had its entire transmission removed, including the torque converter.

Clyde 0-6-0DH 591 *ASHFIELD* (65-441 of 1965) had been removed from its customary position in the locoshed and placed on a siding outside. Its "out of use" status is obvious.

Luke Horniblow, 1/12; Editor 1/12

### **MACKAY SUGAR LTD**

(see LR 222 p. 20)

610mm gauge

There has still been no announcement about the acquisition of the former QR line between Racecourse and Marian although it is believed that negotiations have been continuing since it was first publicly mooted at the end of 2010. The first stage of development was to involve the conversion of the Marian-Pleystowe section to 2ft gauge.

At Racecourse Mill, Eimco B-B DH 20 *BOONGANNA* (L257 of 1990) has received a new MTU engine and is being rewired.

EM Baldwin B-B DH locomotives *SHANNON* (7126.1 5.77 of 1977) and *INVERNESS* (10123.1 5.82 of 1982) have been on ballast train duties at Farleigh while Walkers B-B DH *WALKERSTON* (672 of 1971 rebuilt Pleystowe 1994) is the truck shop shunter. Farleigh Mill's Mill Line at Habana has been cut back about 950 metres from just beyond Mill 2 siding to the Barrow Hill terminus. That includes the Mill 3 and Mill 4 sidings formerly known as Leila and Barrow Hill.

It seems that the locomotives that had been stored at Pleystowe have been moved to the old mill site at North Eton and placed in the shed there. By the end of February, the frames of 7327 (Walkers 689 of 1972) and 7332 (Walkers 694 of 1972) had disappeared from the storage area at North Eton, along with Com-Eng 0-6-0DH *DALRYMPLE* (AL4892 of 1965). A more complete report from North Eton is awaited.

Hayden Quabba 2/12; Scott Jesser 2/12

### **MSF SUGAR LTD, Mulgrave Mill, Gordonvale and South Johnstone Mill**

(see LR 223 p.24)

610mm gauge

Mulgrave Mill's Clyde 0-6-0DH 19 *REDLYNCH* (65-435 of 1965) was noted at Redlynch depot with the weed spray train on 3 March.

The ex-Mulgrave 4-tonne bins are being taken to Goondi by rail and scrapped by the scrap dealer located beside the QR Goondi tramway crossing. Another rake of bins was noted near the QR at Kamma at the end of February, but is unable to be sent south as some bridges near Deeral are being rebuilt. This is probably so that Walkers bogie locomotives can be used on the shuttle from Babinda during the 2012 season.

Thai company Mitr Phol Sugar Corporation Ltd has been successful in its takeover bid for MSF Sugar and on 23 February moved to compulsorily acquire any remaining shares.

Carl Millington 3/12; Mitr Phol 23/2/2012



Showing its many years of disuse in the Millaquin Mill locoshed, Clyde 0-6-0DH 591 *ASHFIELD* (65-441 of 1965) sits outside the shed on 5 January 2012. Hopefully it will be put back under cover before too long. Photo: John Browning



**Above:** Also at the Millaquin Mill locoshed, EM Baldwin B-B DH FAIRYDALE (10048.1 6.82 of 1982) has had its entire transmission removed for maintenance as shown on 2 January 2012. The torque converter normally sits behind the engine and a drop-down gearbox fills the space in the lower centre of the locomotive, with cardan shafts running from it in each direction to power the bogies. Photo: Luke Horniblow  
**Left:** End of the line: the new terminus of Farleigh Mill's Mill line at Habana on 6 February 2012. Photo: Alexander Jesser. **Below:** A Mackay Sugar ballast train stabled at Farleigh Mill's Ossa Junction headed by EM Baldwin B-B DH SHANNON (7126.1 5.77 of 1977) on 13 February 2012. Lurking in the background are a Plasser ballast regulator, and Clyde 0-6-ODH 13 DEVEREUX (67-568 of 1967) on the rail welding train. Photo: Hayden Quabba



# Industrial NEWS

## SUCROGEN (HERBERT) PTY LTD, Herbert River Mills

(see LR 223 p.26)

610mm gauge

During January, Macknade Mill's Clyde 0-6-0DH 16 (DHI.1 of 1954) was put to use on weed spray duties and Clyde 0-6-0DH 12 (65-434 of 1965) took over duties in the truckshop.

By late February the sandblasted and painted components of EM Baldwin 20 (7070.4 4.77 of 1977) had been returned to the mill from David Gianotti and were in the process of being reassembled in the Macknade loco shed.

During February, Victoria Mill's Walkers B-B DH VICTORIA (599 of 1968 rebuilt Tulk Goninan 1994) was also stripped for overhaul. It was expected that the structural components of VICTORIA and Clyde 0-6-0DH LUCINDA (65-436 of 1965) would also be sent away for sandblasting. A newspaper article stated that \$750,000 was being spent on the refurbishment of these two locomotives.

Chris Hart 1/12, 2/12, 3/12; Steven Allan 1/12; Luke Horniblow 1/12, 2/12; *Herbert River Express* 25/2/2012

## SUCROGEN (PIONEER SUGAR) PTY LTD, Pioneer Mill

(see LR 222 p.23)

1067mm gauge

On a visit to the mill on 1 March, Clyde 0-6-0DH MAIDAVALE (63-266 of 1962) was noted with the weed spray wagon while Walkers B-B DH 5803 (682 of 1972) was shunting molasses 'bombs'.  
Luke Horniblow 3/12

## SUCROGEN (PIONEER SUGAR) PTY LTD, Inkerman Mill, Home Hill

(see LR 220 p.28)

610mm gauge

On 5 February, EM Baldwin B-B DH IONA was in the loco shed stripped as part of a complete overhaul. The cab had been sandblasted and painted and a new engine was to be fitted.  
Luke Horniblow 2/12

## SUCROGEN (HAUGHTON) PTY LTD, Invicta Mill

(see LR 223 p.26)

610mm gauge

Com-Eng 0-6-0DH NORTHCOTE (AH4091 of 1965) was noted stripped for overhaul at the mill on 5 February and will be receiving a new Mercedes-Benz engine.  
Luke Horniblow 2/12.

## ISIS CENTRAL SUGAR MILL CO LTD (see LR 222 p.20)

610mm gauge

On 2 January a hi-rail vehicle used by a contractor for weed spraying duties was noted. Wind conditions on the day meant that it could not operate on the track but instead it was on rubber wheels spraying points and embankments.  
Luke Horniblow 1/12



**Top:** Farleigh Mill is the maintenance centre for Mackay Sugar EM Baldwin bogie locomotives and here on 15 February 2012 are 16 CHARLTON (9652.1 8.81 of 1981) originally supplied to Marian Mill, and MIA MIA (9815.1 10.81 of 1981) originally supplied to North Eton Mill. Photo: Mitch Zunker **Centre:** There is plenty of need for weed control in the tropics and here Macknade Mill's Clyde 0-6-0DH 16 (DHI.1 of 1954) battles the vegetation with a rail-mounted spray unit on 25 January 2012. Photo: Luke Horniblow **Above:** Another approach to weed control is to use a contractor's hi-rail equipped vehicle. Here is one such unit ready for duty on the Isis mill system on 2 January 2012. Photo: Luke Horniblow



**Above:** Another weed spray unit, as used on the 1067mm gauge Pioneer Mill system, with Clyde 0-6-0DH MAIDVALE (63-266 of 1962) on 1 March 2012. Photo: Luke Horniblow **Left:** Clyde 0-6-0DH 19 REDLYNCH (65-435 of 1965) with Mulgrave Mill's weed spray unit at Redlynch depot on 3 March 2012. With its low-profile cab it is able to pass under the QR and travel to the extremities of the rail system in the Barron delta. **Below:** The appearance of Pioneer Mill's 5803 (Walkers B-B DH 682 of 1972) has changed little since it left the Mt Isa Mine in 2007. Here it shunts QR molasses tankers at the mill on 1 March 2012. Photo: Luke Horniblow



## SUCROGEN PLANE CREEK PTY LTD, Sarina

(see LR 222 p.24)  
610mm gauge

New bin chassis have been delivered to the mill for assembly. A substantial line of these was noted in the mill yard in early March.  
Scott Jesser 3/12

## VICTORIA

### JOHN HOLLAND PTY LTD, Northern Sewerage Project

(see LR 215 p.30)  
762mm gauge

One of the locomotives used on the Northern Sewerage Project was recently advertised online. This was a Schöma Model CHL 40G 4wDH with a Deutz engine and hydrostatic drive that had only done 1600 hours. The asking price was \$72,000 plus VAT.

Photographs were of the locomotive stored indoors and showed that it had received some cosmetic refurbishment. No running number was visible and the stated build date of 2007 must have been an order date as the initial locomotives for this project were ex works in February 2008.

[http://www.mascus.co.uk/Construction/Used-Construction-other/Schoma\\_Tunnel\\_Locomotive](http://www.mascus.co.uk/Construction/Used-Construction-other/Schoma_Tunnel_Locomotive) via Philip P Graham 2/12

## WESTERN AUSTRALIA

### BHP BILLITON IRON ORE PTY LTD

(see LR 223 p.27)  
1435mm gauge

Construction of 17 Model SD70MACe Co-Co DE locomotives for BHP Billiton Iron Ore is reportedly well under way at Progress Rail, Muncie, Indiana. In early March, the first unit, number 4374, had emerged from the paint shop in the BHP Billiton Iron ore 'bubble' livery.

*WA RAILSCENE* emag 176; Brett Geraghty 3/12

### PILBARA RAIL

(see LR 223 p.27)  
1435mm gauge

Rio Tinto has revived its plan for driverless trains on its iron ore network in a \$483m project named "AutoHaul". No rail positions will be lost until phase 1 of AutoHaul is completed which is scheduled for the second half of 2014. The scheme, to be completed in 2015, will help to increase the capacity of the network to 353 million tonnes per annum. Operations will be overseen from a control centre in Perth, 1500km away. The company has a 1500km rail network and currently runs 41 trains from mines to ports. Not all parts of the system will go driverless, with the Deepdale line and yard operations requiring crewed locomotives.

New General Electric Model ES44DCi Co-Co DE locomotives 8172, 8173 and 8174 (60770 to 60772 of 2011) were hauled to Norfolk, Virginia, in mid-January and loaded onto heavy lift ship *BBC Switzerland* on 17 January 17th for shipment to Dampier. Locomotives 8175 to 8186 (60773 to 60784 of 2012) were not expected to

be shipped until April, although testing of the initial units had begun by February. Delivered during November 2011, 8166 to 8168 are General Electric 60230 to 60232 of 2011 and 8169 to 8171 are 60462 to 60464.

Of the eight former Robe River Model CM-40-8M Co-Co DE locomotives reportedly sold, 9410 (Com-Eng C6096-05 of 1975 reb. Goninan 202, 1996) and 9414 (Goodwin G-6060-05 of 1971 reb. Goninan 124, 1991) arrived at Bassendean by road on 22 February to join 9421 (Com-Eng C6101-01 of 1977 reb. Goninan 137, 1993) and 9423 (Com-Eng C6116-01 1980 reb. Goninan 126, 1992) that had arrived on 18 January.

It is understood that the Model C36-7 locomotives 5051 and 5052 (Goodwin G-6035-02 of 1969 reb. Goninan 072, 1987 & Goodwin G-6041-02 of 1970 reb. Goninan 073, 1987), which remained unsold, will be cut up on site at Parker Point.

*WA RAILSCENE* emag 172, 173, 174, 177 & 178; Tony Burgess 3/12; Rio Tinto Iron Ore 2/12; *Sydney Morning Herald* 20/2/2012.

## OVERSEAS

### FIJI SUGAR CORPORATION

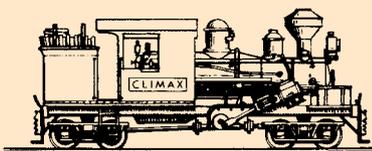
(see LR 223 p.28)  
610mm gauge

Disastrous flooding in the western part of Viti Levu at the end of January affected the Rarawai Mill area particularly badly. As a result of damage to bridges on the Ba River, the Fiji Sugar Corporation rail bridge at Ba had to be made available for road traffic. Work is commencing to repair damaged rail lines in time for the 2012 season.

*Fiji Sun* 10/2/2012; *Fiji Times Online* 7/3/2012



On 4 March 2012, new bin chassis, delivered to the Plane Creek Mill yard, await the fitting of sides and ends in the mill truck shop to be ready for service in the 2012 season.  
Photo: Carl Millington



## Special offer to new members joining the LRRSA by Monday 21 May 2012 ...

### Receive seven copies of *Light Railways* for the price of six.

Annual Subscription for year ending 30 June 2013 is \$48.00 (for international rates see our website).

Normally this covers six issues of *Light Railways*, but if you join by 21 May 2012 you will receive seven issues (Nos 225–231)

Membership also offers substantial discounts (usually 25%) on LRRSA publications, and 10% on other items.

More details: [www.lrrsa.org.au](http://www.lrrsa.org.au)

Application for membership of Light Railway Research Society of Australia Inc. P.O. Box 21, Surrey Hills Vic 3127

I, \_\_\_\_\_  
(full name of applicant)

of \_\_\_\_\_

\_\_\_\_\_ (address) \_\_\_\_\_ (postcode)

\_\_\_\_\_ (occupation)

desire to become a member of the Light Railway Research Society of Australia Inc. In the event of my admission as a member, I agree to be bound by the rules of the Society for the time being in force. I enclose cheque/money order for \$48.00, or please charge my Visa/Mastercard No.

\_\_\_\_\_ Expires \_\_\_\_\_

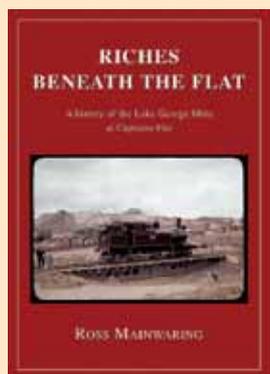
Name on Card \_\_\_\_\_

Signature \_\_\_\_\_

## A selection of LRRSA books ...

### Riches beneath the Flat

A history of the Lake George Mine at Captains Flat



By Ross Mainwaring

Published by the LRRSA.

A history of the standard and narrow gauge railways, town, and silver-lead-zinc mine at Captains Flat, NSW.

Soft cover, 104 pages, A4 size  
62 photographs, 12 maps and diagrams,

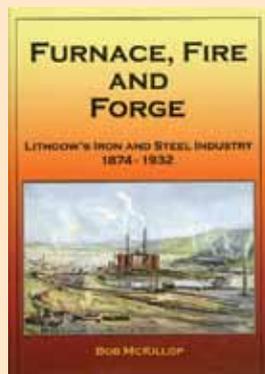
References, and index.

Price \$29.70 plus postage  
(\$22.28 to LRRSA members)

Weight: 490 gm

### Furnace, Fire and Forge

Lithgow's Iron and Steel Industry 1874 – 1932



By Bob McKillop

Published by the LRRSA.

A history of Australia's first major iron and steel works at Lithgow, NSW, including all associated rail operations.

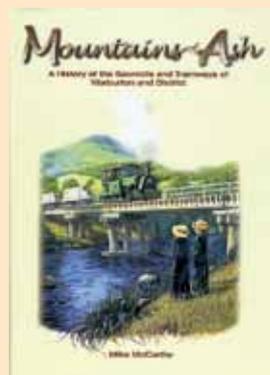
Hard cover, 320 pages, A4 size  
250 photographs, many maps, diagrams, references, bibliography, and index.

Price \$59.95 plus postage  
(\$44.96 to LRRSA members)

Weight: 1,650 gm

### Mountains of Ash

A History of the Sawmills & Tramways of Warburton and District



By Mike McCarthy

Published by the LRRSA.

Hard cover, 312 pages, A4 size

Describes a complex network of over 320km of tramways serving 66 sawmills in a mountainous area.

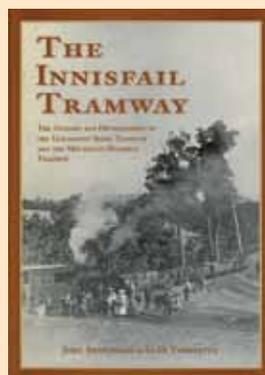
Over 280 photographs, 50 maps and diagrams, references, bibliography, and index.

Price \$59.95 plus postage  
(\$44.96 to LRRSA members)

Weight: 1,650 gm

### The Innisfail Tramway

The History and Development of the Geraldton Shire Tramway and the Mourilyan Harbour Tramway



By John Armstrong & G.H. Verhoeven

Published by the LRRSA.

Soft cover, 128 pages, A4 size  
Describes a 2ft gauge tramway which carried passengers and goods, with 13 steam locomotives.

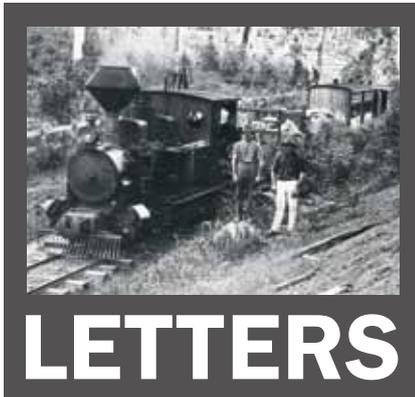
99 photographs, 8 maps and 14 rolling stock diagrams.

Price \$29.95 plus postage  
(\$22.46 to LRRSA members)

Weight 550 gm

Postage and packing: Within Australia, 501 gm to 3 kg \$10.90, over 3 kg \$15.00  
Send to: LRRSA Sales, P.O. Box 21, Surrey Hills Vic 3127, Fax (03) 9701 8221.  
Payment may be made by cheque, money order, Mastercard or Visa.

Buy securely on line,  
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[www.lrrsa.org.au](http://www.lrrsa.org.au)



technical information. The owner's site only mentioned the two new machines with no history. Potentially a future historian would not know that for most of the life of the power station there were five little machines. What I am getting at is that the reliance on web sites, or even when they are citations in research articles, is of little value to future historians as the information is constantly being changed with the old being removed.

I hope this simulates some thoughts on reliability of websites.

Bob Taaffe  
Hobart, Tas

Dear Sir,

**The LRRSA email discussion group**

I have been a member of several railway-orientated organisations, e.g. Australian Railway Historical Society, Light Railway Research Society, Rail Transport Museum, and Illawarra Light Railway Museum Society for periods exceeding 40 years

I have greatly valued the information in their publications and the research carried out by a myriad of writers. I am personally currently researching and writing an extended history of the Kiama Tramways and obviously this has involved much time in archives, libraries, museums etc. as well as researching newspapers and other records on-line.

I recently though, I joined the LRRSA e mail group seeking information on locomotives and works photos etc. and was overwhelmed by the response I received from like-minded people anxious to help me world-wide. This included advice re useful sources of information, the supply of photographs and drawings and general enthusiastic support for my researches..

While repositories such as libraries etc. are invaluable, don't forget your fellow historians who may just possibly have that vital piece of information they are willing to share, and available nowhere else.

I strongly recommend all researchers in the LRRSA join the LRRSA e mail group. I am positive you won't be disappointed.

Graham Harmer  
via email



0-4-2T John Fowler 4668 of 1883 stored at Miller Machinery, South Melbourne, on 9 December 1967. Photo: Richard Warren, collection Richard Horne

Dear Sir,

**Miller and Co (Machinery) Pty Ltd  
(LR 222 December 2011)**

In Andrew Forbes' interesting letter on pages 28 and 29, he comments that he omitted to photograph John Fowler 4668 of 1883 when it was in Miller's ownership. The enclosed photograph was taken on 9 December 1967, just before Andrew started visiting the workshop, and perhaps goes some way to make up for that omission. The enclosed front to the cab, with unusual square windows, was not original but had been added by the time the locomotive was in use by Timms & Kidman on construction of the Tod River Reservoir in South Australia c1918. It was removed when the locomotive was restored by Bruce Macdonald c1976.

**Pemberton Tramway Company  
(LR 222 December 2011)**

The reference on page 38 to former State Saw Mills 4-6-0 SSM 2 being James Martin 127 of 1895 is incorrect. It is, in fact, Beyer, Peacock 5475 of 1911 and still carries that firm's builder's plate, as the attached photographs, taken on 17 October 2011, show.

Richard Horne  
South Croydon, UK

Dear Sir,

**Preservation (LR 222)**

I refer to your comments in your 'Comment' in which you express concern about the field of preservation in the future. I believe your concern is well founded.

We have commercial minded entrepreneurs who enter the 'fun railway' industry to make a dollar. They have even infiltrated the preservation movement. History does not play a large part, if any at all, in their aspirations. Consider the 'americanisation' of the ex-WD 4-6-0T at Dreamworld and of JOHN BENN, now at Puffing Billy, where also SIR JOHN GRICE is sometimes disguised as THOMAS. The failed attempt to regauge the Orenstein & Koppel at Queenstown, Tasmania, with its original



Former State Saw Mills 4-6-0 SSM 2 stored at Pemberton, WA, on 17 October 2011. The insert shows its Beyer, Peacock & Co. Ltd builder's plate. Photos: Richard Horne

boiler being a rare existing example of early welding in pressure vessel manufacture, in 1910. At least that part has been saved, but only by chance, because I doubt if anybody knew its technical significance or cared.

These are examples of the editor's fears which could be real because once something changes ownership, so does its future appearance, use, disuse or disposal and this will be excused because the owners say that it is necessary in order to attract customer finance for their venture. Is a 'Heritage Order' the answer?

Bruce Macdonald  
Canberra, ACT

Dear Sir,

#### **Saving the horses (LR 223)**

I would like to thank John Shoebridge for sharing with us his experiences of working underground. I found this article to be fascinating as it gave us a personal insight to the workings of a mine. I have always been interested in underground workings and have done a few mine tours, although I don't think that I would be cut out to work underground.

Alf Atkin  
Yass, NSW

Dear Sir

#### **Very early rail (LR 221)**

Further to the interpretation of the lettering 'AAC' on the very early cast rail discovered by David Campbell and currently on display in the Newcastle Museum.. Perhaps the accompanying photo, taken by loco driver John Parker, lineside on the South Maitland Railways recently may be pertinent. It would appear to be from the original Aberdare Railway built by the Australian Agricultural Company from Aberdare Junction to Weston and beyond.

John Shoebridge  
Dora Creek, NSW



*A section of early Australian Agricultural Company rail, thought to be from the original Aberdare Railway, discovered beside the South Maitland Railway. Photo: John Parker*

Dear Sir,

#### **Great Cobar locomotives (LR 146) and 'Tom Thumb' (LR 158 & 223)**

Further to my correspondence in LR 223, close examination of the John Fowler & Co Works List (compiled by Frank Jux), suggests the possibility of a link between two of the four Fowler locomotives (4370-4373) that were initially ordered for the Great Cobar copper mine and the return of John Fowler & Co locomotive 3788 to its maker. In December 1882, John Fowler and Co manufactured No. 4451, a six inch cylinder locomotive that was probably a 2-4-0T, for Casas Aulet & Co, replacing locomotive 3378 (probably of 1ft 8in gauge), which was returned to its manufacturer apparently due to a decision to not only increase the number of locomotives that Casas Aulet would operate, but also to utilise a gauge well in excess of 2 feet.

Fowler locomotive 4451 was built only three months after the initial four Fowler locos recorded as being for the Great Cobar mine were manufactured. All four were fitted with 5½ inch cylinders, and as I have previously indicated, two of them failed to arrive at the mine. Very interestingly, immediately following loco 4451 in the Fowler works list, there are two cancellations (4481 & 4482) both for 5½ inch cylinder locomotives that were probably 2-4-0T. My suggestion is that these two cancelled Fowler locomotives had been ordered by Casas Aulet, or that the entries represented an intention to renumber the two Fowler locos that were unwanted at Cobar due to considerations in NSW about the local manufacture of locomotives, which led instead to the ordering of Mort's Dock products.

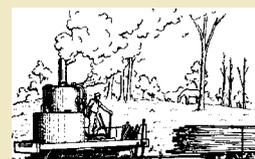
The two unwanted Great Cobar 2-4-0T 5½ inch locomotives (originally 2ft 6in gauge) may have been accepted by Casas Aulet and the deal sweetened by John Fowler and Co agreeing to the return of 3788, although agreement about that aspect could have already been reached. A fleet of three Fowler locomotives at Casas Aulet would have been consistent with other Cuban and Caribbean sugar cane operations around that time.

In the event of the two 'unwanted' Great Cobar Fowlers having arrived in Sydney, it would have been a simple matter for them to be shipped on to Cuba via Cape Horn.

Ron Madden  
Wagga Wagga, NSW

### **Erratum**

Due to a technical issue, Ross Mainwaring's article *The past becomes the present: wooden rails and pipe dreams* in LR 223, appeared without any note numbers in the text. If any LR reader would like a copy of the text with notes intact, please contact the editor (via the addresses on page 2), and a Word document of the complete text file will be forwarded (or a print-out posted, if internet access is not available).



## **LRRSA NEWS**

### **MEETINGS**

#### **ADELAIDE: "Tasmanian railways in the early 60s"**

A video will be shown of Tasmanian railways of the early 1960s. Members are invited to bring along an item of light rail interest, and we would like to hear from any member who can supply current information on heritage or tourist light rail sites in South Australia..

**Location:** 150 First Avenue, Royston Park.

**Date:** Thursday 29 March at 8.00pm.

**Contact:** Les Howard on (08) 8278 3082

#### **BRISBANE: "Col Rough's Slide Show"**

The February meeting will feature a slide show by Col Rough.

**Location:** The MJCQ Club House, Rocklea Showgrounds, Goburra Street, Rocklea (off Ipswich Road)

**Note change of venue for this meeting.**

**Date:** Friday 13 April at 7.30pm.

**Contact:** Bob Gough on (07) 3848 3769

#### **MELBOURNE: "Highlights from Europe"**

Scott Gould will be presenting highlights from three visits to Europe. They will include the Harz Mountain Railway, the Rammelsberg Mine world heritage site and museum in Germany, the Rigibahn and Lucerne Transport Museum in Switzerland, the Train à Vapeur des Cévennes in France, and trams in Rome.

**Location:** Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.

**Date:** Thursday, 12 April at 8.00pm

#### **SYDNEY: "Railway heritage in WA"**

*Light Railways'* Heritage & Tourist editor Bob McKillop will speak about the railway heritage scene in Western Australia, with particular reference to light railways!

**Location:** Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).

**Date:** Wednesday 25 April at 7.30pm

### **LRRSA EMAIL DISCUSSION GROUP**

Have you joined the LRRSA's email discussion group yet?  
See: <http://au.groups.yahoo.com/group/LRRSA/> and click on "Join This Group"!

# LRRSA 'Headstones, Zigzags & Moore' Tour Report

On Saturday 19 November 2011, 25 LRRSA members participated in the 'Headstones, Zigzags & Moore' tour to Kerrisdale situated between Yea and Seymour, approximately two hours drive from Melbourne.

Despite very ordinary weather on the drive up, tour members met at the Kerrisdale Mountain Railway and Museum at 10am. This operation is the creation of Andrew and Jennifer Forbes and is constructed on a mountain top property at the northeast corner of the Tallarook Ranges.

On arrival visitors are treated to spectacular views in all directions from this high point in the ranges. The steam museum comprises a boiler house with vertical boiler and numerous steam driven engines, pumps and turbines that have been restored to working condition. Andrew provided an informative talk about the museum and demonstrated each of the exhibits using steam reticulated from the vertical boiler.

The participants then took the 4wDM Malcolm Moore (No. 1039 of 1943, ex-Australian Army and Mourilyan sugar mill) and the toast rack carriages number 3 and 7 from the bottom points via the zig-zag at the top points to the summit. Andrew stopped the train at the zig-zag for a photo opportunity before continuing onto the summit station. Here the members could inspect a number of historic relics from the old mining days that have been donated to the museum.

The tour group then travelled back to the bottom points for a delightful BBQ lunch and the chance to inspect the workshop where Andrew is constructing his own steam loco. We also had the chance to have a closer look at the Invincible steam tractor and fettlers truck.

After lunch the members took the former NSW Public Works Department Ruston and Hornsby 4wDM (No. 285301 of 1949) up to the summit again for another photo opportunity. Upon return to the bottom points we inspected the lubratorium which was well laid out and scrupulously clean like the rest of the complex.

Around 2pm, Scott Gould thanked Andrew and Jennifer on behalf of the Society for a sensational start to the tour at Kerrisdale. For more detailed information see the Kerrisdale Mountain Railway and Museum website;

<http://www.kerrisdalemtnrailway.com.au>

The tour group then drove to Wright's granite siding on Falls Creek just past the Trawool Valley Resort. In the 1890s William Wright established a granite quarry and monumental stone works using granite from the creek, shipping the finished product via a short broad gauge tramway connected to Granite Siding on the Tallarook to Yea railway.

Falls Creek cascades over a significant buttress of granite which rises around 100 meters above the quarry and is up to 100 metres wide in places and very impressive. Wright built a dam and pipe work high on the creek to provide hydraulic power to a Pelton wheel at the finishing works. The granite was lowered down beside the creek by an incline from the quarry.

All that remains today are a few pieces of granite and roofing iron at the site of the works. Some of the more energetic members followed the creek up to the dam where they found granite blocks on the southern side of the creek as well as several large coils of rusty wire rope. The lower dam is a substantial masonry block construction a long way above the quarry. There are two other dams higher on the creek which were not visited this time.

Around 3.30pm most of the group made their way into Tallarook, former junction of the Yea, Alexandra and Mansfield branch lines. Here they inspected the final goal of the day: a short section of what appears to be the formation of WG Knott's, six mile long Tallarook sawmill outlet tramway. This survives in the most unlikely position between the footpath and the pre 1960s deviation of the Hume highway, near the railway goods yard.

Several members called it a day there, while 13 went south to the ballast siding that was used for construction of the Seymour railway, and later the branch from Tallarook to Yea in the 1880s. By that stage the weather had deteriorated and the remainder of the group headed back to Melbourne after a great day's outing.

Thanks are extended to Scott Gould for arranging another memorable tour and to Peter Evans, Colin Harvey, David Langley and Bob Whitehead for their assistance in providing material for the tour notes.

*Simon Moorhead and Scott Gould*



*Host Andrew Forbes (left) and the LRRSA tour group pose for a photograph at the summit station.*

*Photo: Simon Moorehead*



## RESEARCH

### THE RESEARCH COLUMN

Over recent months the *Light Railways* editors have received a number of positive responses from readers regarding the quality of the articles published in the magazine and the value of the Industrial Railway News and Heritage & Tourist news sections in documenting current activities in their respective fields for the railway history researchers of the future. This column, together with the LRRSA online discussion group, serves as a vehicle for the exchange of information among researchers. The following item is an example of the kind of information the column seeks to promote, while it also documents useful archives for researchers and provides short reports on unusual findings by researchers.

Ian Cutter has expressed his thanks to the LR readers who responded to his request for information on the loaded 2ft 6in gauge timber wagons at Erica in July 1963. This exchange has resulted in Ian providing Mike McCarthy with several photos taken at Erica at this time for the manuscript he is preparing on this subject.

The LRRSA Council has indicated its desire to see this column develop further as a forum of information exchange among light railways researchers and to document LRRSA tours. While I have indicated my desire to step-back from my involvement as Heritage & Tourist editor (LR 223, p.2), I am happy to continue with this column for the time being in order to guide its further development as an effective forum for researchers and the LRRSA.

Bob McKillop

### AIF Railway Operating Companies on the Western Front, 1916-18

Graham Wilson, a military historian based in Canberra, is undertaking research for the Army History Unit.

His focus is currently on unexplored aspects of the AIF in World War I and his next project is to research and write a book on the history of the AIF railway operating companies on the Western Front from 1916-1919.

Graham has approached the LRRSA with a request to make contact with readers of *Light Railways* who may have knowledge of the workings of both the Light Railway Operating Companies (1st-3rd) and/or the Broad Gauge Railway Operating Companies (4th-6th) of the AIF. As a historian who has focused on the logistical side of military operations, Graham has a close interest in the AIF railway units. At this stage the format of the book is undecided, although it will of course have to include good clear images and line drawings of the equipment used (such as the light 20hp Simplex petrol locomotives).

Graham invites readers to contact him by mail at: GF Wilson, PO Box 6021, Lanyon LPO, Conder ACT 2609.

### BRITISH & TASMANIAN CHARCOAL IRON COMPANY, Redbill Point, TAS

One never knows what one will find in the most unlikely places – this item (at right) appeared in *The Star*, Christchurch, of 25 March 1875, page 2, re-printing an item from a Scottish paper. In Scottish terms, 'West Country' seems to be any place on the Glasgow side of the country as opposed to the Edinburgh side! Andrew Barclay & Son supplied, among other things, a standard gauge 0-4-0ST locomotive (B/n 167 of 1873). This all goes to show that researchers should check the New Zealand papers in addition to Australian papers.

See <http://paperspast.natlib.govt.nz>

Phil Rickard

*Editor: The British & Tasmanian Charcoal Iron Company erected Australia's first modern iron-making blast furnace at Redbill Point in 1875, but the venture was an inglorious failure. The Andrew Barclay locomotive, however, had a long and productive life. It was auctioned with other company assets on 1 May 1878 and it came into the ownership of the NSW railway contractor Alexander Amos at an unknown date. It was included in the sale of railway assets on behalf of the Amos estate held at the quarry master*

**IRON WORKS IN TASMANIA.**—The following with regard to the new iron industry in Tasmania is from a late number of the *Ardrossan Herald*:—"The ship *Cape Finisterre* was brought here to take in as cargo the complete plant for smelting iron ore in Tasmania, in which province this valuable metal has been discovered in large quantity, and of superior quality. The works are to be erected near Launceston, about two days' sail from Melbourne, by the British and Tasmanian Charcoal Iron Company (Limited), and it is interesting to notice that this is the first exportation of blast furnace plant to the Australian colonies of any importance, and may be the beginning of a large trade of this kind. We learn, too, that the furnishers of the plant are all West Country firms. Messrs Andrew Barclay and Sons, Kilmarnock, supply the machinery and ironwork; Messrs A. Kenneth and Son, Kilwinning, and Messrs Loudon and Russell, Newmans, the bricks and furnace blocks. In addition, the vessel takes out all the necessary tools of every description for carrying on the works when started. About a dozen mechanics go out to assist in the erection, and in the smelting operations, the management, we understand, having been entrusted to a gentleman of considerable experience—Mr Robert Scott, late of Coltness Ironworks and Addiewell Oil Works. Messrs James M'Ewan and Co., of Melbourne and London, are the shippers, and act as agents for the company in this country; and it is not the least interesting circumstance in connection with this shipment that a member of the firm in Melbourne is Mr William Kerr Thompson, an Ayrshire man, and the son of a former provost of Irvine."

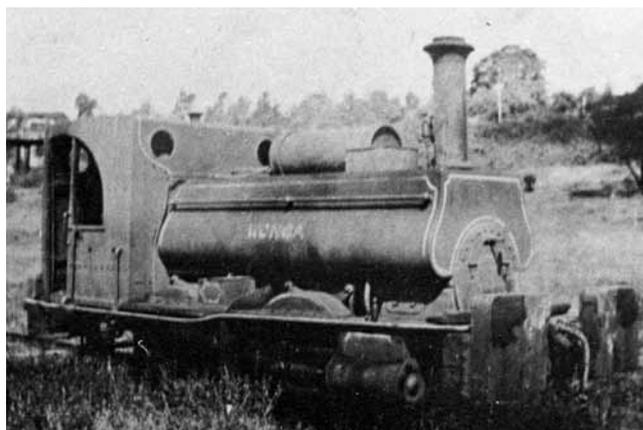


Photo of WONGA taken c1925, and sent to Andrew Barclay in 1926 by a Mr R Guthrie of Wongawilli Colliery. By that stage, the cab had been enclosed and air brakes fitted. Photo: Richard Horne Collection

Robert Saunders' premises in Pymont, Sydney, on 18 October 1916. The purchaser was G&C Hoskins Limited for use at its Wongawilli Colliery near Dapto. Named WONGA by its new owner,

Andrew Barclay 167 worked at Wongawilli until 1923. It was sold or transferred to Southern Blue Metal Quarries at Berrima in October 1927 and was scrapped there in 1942.



## 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: art@boxcargraphics.com.au

### NEWS

#### Queensland

##### **DURUNDUR RAILWAY, Woodford** 610mm gauge

##### **Australian Narrow Gauge Railway Museum Society Inc**

Following the concrete pour for the first ever inspection pit in November (LR 223, p. 33), rails connecting the pit to the No.2 Workshop Road were completed and there was a sense of achievement when former Marian Mill 4wDH *GEMCO* (George Moss 1965) became the first locomotive driven onto the pit on 7 January 2012. With ex-Pleystowe Mill 0-6-2T 5 (Bundaberg Foundry 5 of 1952) out of service for boiler repairs, *GEMCO* has been the main operating loco in 2012, with ex-Marian Mill 6wDM *NETHERDALE* (Bundaberg Foundry 13 of 1954) as stand-by.

*Durundur Railway Bulletin*, 33:314 March/April 2012

##### **BUDERIM-PALMWOODS HERITAGE TRAMWAY TRAIL, Maroochydore** 610mm gauge **Buderim-Palmwoods Heritage Tramway Inc.**

Updating the report in LR 214 p. 34), the restored 0-6-2T locomotive (Krauss 6854 of 1914) is to be displayed in Buderim at the corner of Lindsay Road and Burnett Street as part of the Buderim Central Parklands Concept Plan. There will be signage describing the 2 feet 6 inches gauge Palmwoods-Buderim

Tramway that operated from December 1914 until 10 August 1935. The loco will be housed in an enclosure with glass panelling.

*Buderim Chronicle* 20 October 2011; RHSQ Bulletin No.760, February 2012

##### **LESTER SCHREIWEIS,**

**Rosewood** 521mm gauge  
Ongoing research for a forthcoming book about locomotives built by the Bundaberg Foundry has led to the discovery of a Bundaberg Jenbach Model BJ15 15hp 4wDM mining locomotive at a private location in the Rosewood area west of Ipswich. The locomotive, which is currently dismantled, was obtained from the closed Rosewood Colliery in 1979. Its identity is proved to be Bundaberg Foundry 15 of 1955 by the stamping 'BJ15 No.15' found on the frame. It was without an engine when acquired, but Jenbach engine 5187, originally fitted to Jenbach locomotive 1154 of 1953, was obtained with the loco.

Mr Schreiweis also owns a similar Jenbach Model JW15 locomotive that was used to power a pump to obtain underground water for a coal washery at New Lanefield in the Rosewood district during the 1970s. This locomotive was taken to New Lanefield from Rosewood Colliery in 1974 and has Jenbach engine 6204, originally fitted to Bundaberg Foundry 15. Its identity has so far not been established.

John Browning, 02/12

##### **DAVID EGLINGTON, Toowoomba**

610mm gauge  
Two Jenbach Model JW15 4wDM mining locomotives that disappeared following the closure of Burgowan No.13 Colliery in the Maryborough district have been located in the Toowoomba area. These are 1077 and 1079 of 1951, which were numbered 4 and 1 respectively at Burgowan No.13 (see LRN 60, p.11). They had been purchased by Cecil Longford at Spring Bluff in about 1986 and passed to the present owner in 2011. The locomotives are on private property and only be visited by prior arrangement.

John Browning, 02/12

#### New South Wales

##### **AUSTRALIAN TECHNOLOGY**

##### **PARK, Redfern** 1435mm gauge

The ATP held an open day on Saturday 25 February 2012, which was to feature ex-SMR 2-8-2T No.18 (Beyer Peacock 5909 of 1914) shunting back and forth in Locomotive Street between 10am and 4pm as the 3801 Limited contribution to the event. Unfortunately No.18 failed its light engine trial at East Greta, so plans were made to substitute ex-SMR 2-8-2T No.10 (Beyer Peacock 5520 of 1911). No.10 underwent a trial to Neath on Friday 23 February with Co-Co DE 4918, a water gin and two carriages, but this too had

problems, so only 4918 and its carriages returned to Sydney. The open day featured presentations by Dick Butcher on industrial processes undertaken by the heavy machinery retained in Bays 1 and 2, and heritage interpretations of the hydraulic power system by John Gibson.

APT Open Day program; LocoShed Group postings 23 Feb 2012

##### **STATE MINE RAILWAY, Lithgow** 1435mm gauge

##### **Lithgow State Mine Railway Limited**

Updating the report in LR 221 (pp 34-35), another of the former AI&S/Bluescope Steel English Electric locomotives from Port Kembla will see service at the LSMRL railway in the near future, this time in the form of the one-off 1800hp Co-Co DE D34. This locomotive (English Electric Aust. A.197 of 1969) was acquired to haul trains from outlying coal mines to the Port Kembla steelworks. It was not included in the hand-over of locomotives to Pacific National when it took over rail operations at the works, and was set aside in storage. When LSMRL was negotiating for the transfer of D6 and D24 to Lithgow in 2011, it was invited to submit a tender for D34, and was advised that this had been successful in October. After completion of mechanical alterations in February 2012, D34 was schedule to be transferred to



Steve Baker drives 4wDM GEMCO onto the new inspection pit at the Durundur Railway for the first time on Saturday 7 January 2012.  
Photo: Terry Olsson

Lithgow. It will provide the State Mine Railway with motive power capable of main-line operations. The growing collection of English Electric industrial locomotives at the State Mine owes much to Jerry Platt, the then General Manager Iron and Steel Making at the Port Kembla works — and a major contributor to the LRRSA book *Furnace, Fire & Forge* — and Bill Parkinson, the former electrical technician at the steelworks locomotive workshops. It was Jerry's initiative that saw

the donation of the 1960 vintage 400hp locomotive D23 to the State Mine Railway and Bill's technical expertise that saw it arrive at Lithgow under its own power on 22 December 1995. Jerry also oversaw the donation and transfer of fellow 400hp locomotive D20 and D21 to Lithgow 12 months later, together with a large quantity of spare parts. Bill Parkinson has been responsible for commissioning and maintaining the Lithgow State Mine Fleet of heritage English Electric locomotives and has demonstrated

a talent for obtaining obsolete spare parts for the 400hp locos.

The LSMRL acknowledges the major contribution made by these two gentlemen in making the preservation of these important English Electric industrial locomotives in a steelworks setting possible. 2012 is shaping up to be a big year for LSMR which should see tourist operations commence on the branch line, 2605 in steam and both D23 and D20 operational again together with its newest acquisition, D34.

Michael Wilson, 02/12

## Victoria

### PUFFING BILLY RAILWAY

762mm gauge

#### **Emerald Tourist Railway Board**

Following the commencement of restoring and gauge converting the ex-South African Garratt locomotive NGG129 (LR 223, p. 35), the ETRB commenced negotiations for the purchase of sister 2-6-2+2-6-2 locomotive NGG16 127 (Beyer Peacock 7428 of 1951) and spare parts in South Africa. NGG16 127 was operated by the 610mm gauge Alfred Country Railway and was in traffic when this line closed in 2004. As part of the purchase, PBR representatives were also able to strip some components from derelict NGG16 loco, including two cylinders, pistons, piston rods, valves, valve rods and valve gear, slide bars, crossheads and suspension springs. These items and the locomotive were expected to arrive in Melbourne in March 2012. The ETRB has also purchased a container load of spare parts (some new, some second-hand) which will follow. Ray Leivers, Chairman of the ETRB, said: "We believe that the money spent in these purchases will be offset in the savings made in the restoration of NGG16 129."

It has also been announced that a new boiler was being designed for the ex-West Melbourne Gasworks 0-4-0T CARBON (Couillet 986 of 1890) and an order was expected to be placed in February 2012.

PBR Weekly Notice 06/12, 10 February 2012; PBR *Monthly News* 463,

### **ALEXANDRA TIMBER**

**TRAMWAY** 610mm gauge

#### **Alexandra Timber Tramway & Museum Inc**

The ATTM hosted the 2012 Alexandra Australia Day event, which featured the formal opening of the Alexandra section of Goulburn River High Country Rail Trail by Murrindindi Shire mayor, Cr John Walsh. The opening went beautifully in front of a very welcoming crowd of residents, bike riders and members of the Alexandra Horseman's Association and a large contingent of local and regional media. The event made its own segment on WIN Regional News that night with great footage of Kelly & Lewis 0-6-0DM (B/n 5957 of 1936), replete with large Australian flags, wending its way around the main line. All the museum rooms were open



The former Bluescope Steel 1800hp locomotive (English Electric Aust. A.197 of 1969) in storage at Port Kembla was photographed by Michael Wilson when a group of State Mine Railway officials inspected it in September 2011.



Proudly displaying Australian flags, Kelly & Lewis 0-6-0DM 5957 of 1936 operates passenger trains at the Alexandra Timber Tramway & Museum at the special Australia Day event. Photo: Bryan Slader

during the event and were well patronised, while the train had 216 passengers during its 2½ hours of operation. The full Goulburn River High Country Rail Trail is scheduled to open in March 2012.

The recent boiler inspection of the 0-6-0T locomotive (John Fowler 11885 of 1909) identified a problem with the front tube plate. Following consultation with the workshop manager of the Puffing Billy Railway, it has been decided to pad weld the damaged area and replace 15 rivets. All studs will also be removed and the threads cleaned. With sufficient volunteers available, it is hoped to have the repairs completed and the loco returned to service for the Easter events.

*Timberline 123, February 2012*

### **CENTRAL DEBORAH GOLD MINE, Bendigo**

#### **Bendigo Trust**

This popular attraction took out the top award in the Heritage and Cultural Tourism category of the 2011 RACV Victorian Tourism Awards and was scheduled to represent the state at the 2011 QANTAS Australian Tourism Awards at Cairns in March 2012. Central Deborah operated from 1939 to 1954 and is promoted as the last commercial mine to operate on the wealthy Bendigo gold field. Bendigo Mining Limited later resumed mining hundreds of metres below the original Central Deborah Gold Mine and it provides the water draining system for the tourist mine. The latter is the terminus for the Bendigo Tramways which operates services every 60 minutes.

The original Central Deborah Gold Mine offers a range of underground tours. An extensive network of narrow gauge remains in the drives. A feature at the 61-metre level is an operating rail-mounted EIMCO bogger running on a short section of track, which is powered by compressed air. An underground visit at this attraction is highly recommended.

For further details, see: <http://www.central-deborah.com>

Ken Littlefair, 02/12

## **Tasmania**

### **REDWATER CREEK STEAM RAILWAY, Sheffield**

610mm gauge

#### **Redwater Creek Steam & Heritage Society Inc**

Chris Martin, chairman of the TATrail group and vice-chairman of ATHRA, was awarded the John

Monash Medal for Contribution to Engineering Heritage in recognition of his efforts in the preservation of the Lake Margaret Power Scheme as an operating heritage scheme in Tasmania. This project was featured in *Light Railways 223* (pp 16-23). Chris was also recognised for his contribution to the heritage sector as the foundation president of the RCS&HS and in organising the annual Tasmanian SteamFest at Sheffield.

*ATHRA News Issue, 12 February 2012*

### **WEST COAST WILDERNESS RAILWAY, Queenstown**

1067mm gauge

#### **Federal Hotels Limited**

The refurbishing of the Abt 0-4-2T locomotives at the WCWR workshops in Queenstown has incorporated the Livio Dante Porta's Lempor exhaust ejector system to enhance their fuel efficiency and power. With the Lempor ejector, as one cylinder ejects it creates a vacuum in the other cylinder, thereby requiring less power to drive the piston. The Lempor exhaust is claimed to

deliver a 100 per cent improvement in draughting capacity over traditional exhaust systems, with an overall increase in locomotive power of around 40 per cent.

In February 2011 Nigel Day from the UK visited the WCWR to assist with the fitting of a Lempor exhaust ejector to Abt 0-4-2T No.5 (North British 24418 of 1938). Designed to fit within the locomotive's existing chimney, the Lempor was an instant success, providing a more efficient locomotive with fuel savings of some 160 litres per trip. It also



*West Coast Wilderness Railway's Abt 0-4-2T No.5 (North British 24418 of 1938), now fitted with a Lempor exhaust ejector, is seen in action on 27 September 2011.*

*Photo: John Kramer*



*Karri timber lagging being applied to the stripped-down boiler of 0-4-0STMARGARET (Bagnall 1801 of 1907) at the Cobdogla Irrigation & Steam Museum in February 2012.*

*Photo: Denis Wasley*

provided more power should this be needed. WCWR officials were so pleased with the modification, that a similar unit was fitted to Abt 0-4-2T No. 3 (Dübs 3730 of 1899) during 2011. This unit has a wider diffuser than that fitted to No.5, which is expected to further increase efficiency. No.3 entered the workshops for a major overhaul in early 2012 and Nigel Day has returned to assist with further modifications to the system during this work.

Nigel Day page on Marty Bayne Modern Steam webpage, 02/12

### WEE GEORGE WOOD STEAM RAILWAY, Tullah 610mm gauge Wee George Wood Steam Railway Inc.

The society's website is out of date, with a new site being under construction. With 0-4-0WT *WEE GEORGIE WOOD* (John Fowler 16203 of 1924) awaiting a replacement boiler, trains continue to operate using ex-Lake Margaret Tramway 4wPM (Nicola Romeo 770 of 1925). Services operate from 10am to 4pm on the first Sunday and last Saturday and Sunday of each month through until June 2012. A more detailed report will follow in a forthcoming issue.

Graham Hawes, 01/12

## South Australia

### COBDOGLA IRRIGATION & STEAM MUSEUM 610mm gauge Cobdogla Steam Friends Society Inc

During early 2012, Cobdogla Steam Friends members have been engaged in the process of undertaking boiler inspections of 0-4-OST *MARGARET* (Bagnall 1801 of 1907) and the Fowler Z7 traction engine. For the first time since the Bagnall was restored in 1988, the inspector asked for the cladding of the boiler to be removed for an outside shell inspection. The strip down included the usual fittings for a normal inspection plus the removal of the saddle-tank, cab sides, roof and boiler cladding. It was discovered that the insulation used was fibreglass bats, which were found to be highly compressed and starting to disintegrate into powder. The cab side, saddle-tank and sand boxes have been grit blasted and taken to a local crash repairer for painting. It was decided to use Karri timber slats for the insulation and one of the members machined

## Coming Events

### APRIL 2012

**1 Durundur Railway, Woodford, QLD:** Narrow gauge trains operate on the first and third Sunday of the month 1000-1600. Phone: (07) 5496 1976 (recorded information) or 3848 3769; website: <http://www.angrms.org.au>  
**1 Ballyhooley Steam Railway, QLD:** This narrow gauge railway operates steam trains between Marina Mirage station and Port Douglas every Sunday and on selected public holidays from 1020 to 1500. Information: (07) 4099 1839.

**1 Wee Georgie Wood Railway, Tullah, TAS:** narrow-gauge train rides with historic 4wPM locomotive from 1000-1600. Trains operate on first Sunday and last Saturday-Sunday of the month through to the end of June. Information: (03) 6473 1372.

**7-9 Kerrisdale Mountain Railway & Museum, VIC.** KMR Easter SteamFest with live steam operations all weekend, narrow gauge trains operate over scenic railway on the hour and a special Luncheon package. Booking essential Trains operate each Sunday between 1000 and 1500, with demonstration of steam engines in the museum and workshop tours. During school holidays (31 Mar-15 April) a train also operates at 1pm on Friday, Saturday and Monday. CLOSED during June. Information, phone (03) 5797 0227 or website: [www.kerrisdalemtnrailway.com.au/](http://www.kerrisdalemtnrailway.com.au/)

**1-30 Ida Bay Railway, TAS:** Narrow gauge train trips over scenic route from Lune River along the banks of the river estuary and Ida Bay to Deep Hole. Trains depart daily at 0930, 1130, 1330 and 1530 for the 2 hour return journey until 30 April. Cabin accommodation and camping facilities on site. Enquiries: (03) 6298 3110 or <http://idabayrailway.com.au>

**7-8 Red Cliffs Historical Steam Railway, VIC.** Narrow gauge steam operations with train rides every half-hour 1100-1600 using Kerr Stuart steam and EM Baldwin diesel locomotives, 1100-1600 and the first weekend of following months. Enquiries: (03) 5024 1345.

**7-8 Redwater Creek Steam Railway, Sheffield, TAS.** Narrow gauge steam train operations on the first weekend of every month. Information: [www.redwater.org.au](http://www.redwater.org.au)

**6-22 Semaphore & Fort Granville Railway, SA:** Miniature steam trains operate daily during the school holidays 1000-1600. Fares: \$7 adult, \$5 children and \$20 family. Phone (08) 8341 1690 for information.

**7-9 Alexandra Timber Tramway, VIC.** Easter Gala event with steam trains operating each day with other attractions. Harvest Market Day 14 April with trains hauled by petrol-powered locomotive and diesel-hauled trains on Sunday 22 April. Information and group bookings: 0427 509 988.

**8 Cobdogla Irrigation & Steam Museum, SA:** Narrow gauge steam train rides 1100-1630 together with operation of the historic Humphrey Pump at the Irrigation Museum for information, phone (08) 8588 2323.

### MAY 2012

**6 Puffing Billy Railway, Belgrave, VIC.** Great Train Race with competitors competing against the Puffing Billy train over 13.2km from 0930. For details see: <http://www.puffingbilly.com.au/news-events>

**12-13 Alexandra Timber Tramway, VIC.** Harvest Market Day on Saturday with trains hauled by petrol-powered locomotive and steam trains on Sunday for Mothers' Day special event. Diesel-hauled trains on Sunday 27 May. Information and group bookings: 0427 509 988.

**19-20 Campbelltown Steam & Machinery Museum, NSW.** Oil, Steam & Kerosene Field Days with narrow-gauge steam-hauled trains running over extended track, working steam displays and stationary oil engines. Details at 0417 215 513 or: [www.csmm.com.au](http://www.csmm.com.au)

**20 Bennett Brook Railway, WA:** Friends of *THOMAS* Day 0930-1600 with unlimited narrow-gauge train and vintage bus rides, live jazz, farm animals, free entry to Revolutions Museum and fire engine display. Bookings at: (08) 9534 3215 (0900-1700).

### JUNE 2012

**10 Cobdogla Irrigation & Steam Museum, SA:** Narrow gauge steam train rides 1100-1630 together with operation of the historic Humphrey Pump at the Irrigation Museum for information, phone (08) 8588 2323.

**10-11 Alexandra Timber Tramway, VIC.** Narrow gauge steam trains operating each day for the Alexandra 'Truck, Rod & Ute Show' and Queens Birthday celebrations. Diesel-hauled trains on Sunday 24 June. Information and group bookings: 0427 509 988.

**Note:** Please send information on coming events to Bob McKillop – [rfmckillop@bigpond.com](mailto:rfmckillop@bigpond.com) – or 140 Edinburgh Road, Castlecrag NSW 2068. The deadline for the Junel issue is 27 April 2012.

## Heritage & Tourist

these to size and glued thin spacer strips on each end of the strips so that an air space is created between the boiler shell and the timber. The strips had been fitted to the barrel by late February.

The top of the brick arch needed recasting and this work has also been completed. Other items receiving attention are the repair of a broken spring on the front axle and the revamping of the oil burner system. It is hoped to complete rebuilding of the loco in time for its use at the March open day.

The monthly Wine and Food Trains have been successful to date and will be continued after the winter break.

Denis Wasley, 03/12

## Western Australia

### BENNETT BROOK RAILWAY, Whiteman Park 610mm gauge Western Australian Light Railway Preservation Association Inc

The long-standing project to erect an improved loco watering facility at Whiteman Village Junction station was finally completed on 30 November 2011 when water flowed from the arm of the overhead water tank. The genesis of the project occurred in May 1992 when WALRPA members visited the WAGR yard at Gnowangerup to dismantle the water column and tank located there. The tank was too badly rusted, but the column and tank stand were brought back to Whiteman Park and stored. Subsequently, the cast iron arm of one of the two tanks at the WAGR Formby Siding watering stop was salvaged by WALRPA volunteers. A water tank, somewhat smaller than WAGR tanks and therefore easier to handle, was obtained from a salvage yard at Hazlemere (it is thought to be from the Midland abattoir).

The project to erect a loco water tank at Whiteman Village Junction commenced in mid-2008 under Ross Parker's guidance. The stand was erected at the Mussel Pool workshops and the footings were marked out at VWJ station for the concrete foundations to be poured. The tank was readied for sand-blasting and painting, while repairs were made to damaged parts of the water column. The tank and stand components were

transported by rail to WVJ station in December 2009. There were some delays to the project to construct a new roof for the tank, with this being fitted in August-September 2011. The tank was placed on the stand and several months of installation work followed for the tank-mounted column, plumbing and fittings. Placement of the free-standing water column from Gnowangerup on No.1 road will follow.

2-8-2 NG 123 *FREMANTLE* (Anglo-Franco-Belge 2670 of 1951) is out of service pending the fitting of a new ash pan. This is a major project requiring the removal of the boiler, so it has been decided to bring forward the loco's 10-year overhaul by several years. This will ensure that all parts are functioning properly and the loco will also be repainted. 0-6-0DM *ROSALIE* (John Fowler 4110019 of 1950) is also out of service for the fitting of new springs. On the positive side, Wallis Drilling personnel were fitting the new gearbox to the former WA PWD 4wDH PW27 (Gemco Funky 1963; see LR 218, p.37).

*BBR Newsletter*, February 2012

## **GOLDEN MILE LOOPLINE RAILWAY, Boulder**

1067mm gauge

### **Golden Mile Loopline Society Inc**

Operations on this tourist railway ceased in January 2004 as Kalgoorlie Consolidated Gold Mines P/L (KCGM) reclaimed the land through which the line ran for extensions to its Super Pit open cut mine (LR 173, p. 30, LR 176, p. 31). The Loopline Railway Museum was opened in the Boulder railway station in March 2004 to maintain public engagement with the GMLS. KCGM made a \$1 million donation to the GMLS towards the reconstruction of the railway line on a new location and a fund-raising committee was formed in 2003 to raise additional funds to cover construction costs.

The KCGM contribution to the Loopline Heritage Restoration Project was subsequently increased to \$1.5 million and a further \$1 million was contributed by the state and local governments, while Brookfield Rail has supplied the rails, sleepers and points for the project.

The anticipated construction of new track has been a long time in gestation, but action is finally under way to build the line on a new alignment to the Super Pit lookout, with subsequent extensions to Kalgoorlie and Hannans North Mine. The initial work was the rebuilding of Boulder station, which had been badly damaged in the 2010 earthquake. This work was nearing completion when the site was visited in August 2011. Since then, restoration work has been undertaken on the workshops area and track in the station yard, with restoration work continuing on the locomotives and rolling stock. The locos are ex-WAGR Y-class Bo-Bo DE Y 108 (repainted by January 2012), B-class 0-6-0 DH 1610 *BRUTUS* and Z-class 0-6-0 DM *OLIVE*. The GMLR hopes to lease ex-WAGR 2-6-0 *LESHENAU LT LADY* (James Martin 174 of 1898) from Rail Heritage WA when train operations resume and it has purchased "a DD class steam locomotive".

The GMLR has announced that train operations from Boulder station will resume in September 2012 and the line to the Super Pit will

be operating by the end of the year. Extension of the line to Hannan Street in Kalgoorlie remains a long-term project.

Editor; *Kalgoorlie Miner* newspaper, 28 January 2012, pp 34-35

## **AUSTRALIAN PROSPECTORS & MINERS' HALL OF FAME, Kalgoorlie**

Updating our report in LR 221 (p. 38), in November 2011 it was announced that this site would be mothballed for three months while the board looked for options to make the business viable. Ten fulltime and 26 casual staff were stood down on 16 December with only the caretaker and a Perth-based outreach worker retained while the board explored strategies for a more viable operation. When the Australian Prospectors and Miners' Hall of Fame first opened in October 2001 it was envisaged as a national icon that would celebrate and educate the public about the contribution of mining to Australia. It has struggled to cover operating costs, however, although the situation had improved since the appointment of Alan Groovey as CEO in 2009, in part due to a \$290,000



*The Bennett Brook Railway's former Bunning Brothers 4wDM RUSTON (Ruston & Hornsby 1957) assisted in moving 0-4-2T BETTY THOMPSON (Perry Eng 8967.39.1 of 1939) to the new water tank at Whiteman Village Junction station on 21 January 2012 to test how long it took to fill the side tank. Photo: James Waterhouse*

rescue package from the State Government. A new board elected in June 2011 decided that the operating financial shortfall was not viable and a more sustainable business model was required to move forward.

At the time of preparing this report, the Miners Hall of Fame website was still live and there was no indication that the site was closed. If any reader can provide an update, this would be appreciated.

ABC Goldfields Radio, 16 November 2011

## Overseas

### WAR OFFICE LOCOMOTIVE TRUST, United Kingdom

610mm gauge

Updating the report in LR 216 (p. 36), with the Conservation Plan finalised, work commenced on dismantling the ex-Bingera Mill 4-6-0T (Hunslet 1215 of 1916) for complete overhaul in late February 2012. Full visual inspection of the loco shows that while external appearance looks `poor` many `vital

areas` are in reasonable condition, although exact work required will depend on what is found once completely stripped. Restoration work is to be undertaken by the same team of volunteers that sympathetically restored Hunslet 0-4-0ST EDWARD SHOLTO.

To ease restoration and enable safe handling the loco will initially be partially dismantled, before the bulk of parts are dispatched to the restoration centre. If all goes to plan, it is hoped to have the loco in full

## Heritage & Tourist

operational condition in 2014 – the centenary year of the commencement of WW1 hostilities.

Although WOLT has ongoing grant applications pending, to maintain momentum and ensure the restoration target is achieved, it has launched an appeal to raise £1000 per month.

Details are available on its website at: [www.wols.org.uk](http://www.wols.org.uk)

Ian Hughes, 02/12

### Baulevu, Fiji

An amazing discovery has been made with the unearthing, at Baulevu in the old Nausori Mill area, of one of Colonial Sugar Refining Company's original Decauville 610mm gauge locomotives built by Couillet.

Villagers noticed a metal object protruding from the river bank at Nasi settlement near Nacokaika Village and after doing some digging they realised they had found an old locomotive. It took them nearly three weeks to completely expose it.

The locomotive is 0-4-0T Couillet 736 of 1884 (Decauville 25 of 1884), named *KIDD*, which was evidently abandoned on the isolated tramway at Bau Levu upstream of Nausori when replaced by an Andrew Barclay locomotive in 1935.

It was reported that the villagers had started cutting the locomotive up for scrap, with a photograph showing a part of the boiler shell cut out.

However, following listener responses to a radio report it was stated that efforts were being made to save the historic locomotive and that its destruction had been halted, but no subsequent information is available.

Fiji Broadcasting Corporation 3/12/2011 & 5/12/2011 via Chris Hart



*This unusual vertical-boilered, rail-mounted machine was photographed at Boulder railway station on 24 August 2011. Unfortunately there was no interpretative signage provided, but it is understood that this is a steam navy built by Whittaker Brothers. Can any reader provide details of its origins and purpose?*

*Photo: Bob McKillop*



*Ex-War Department Hunslet 4-6-0T 1215 of 1916 photographed on 25 February 2012 just before dismantling commenced for its restoration to working order.*

*Photo: Ian Hughes*

### LRRSA EMAIL DISCUSSION GROUP

Have you joined the LRRSA's email discussion group yet?

*Go to:*

<http://au.groups.yahoo.com/group/LRRSA/> and click on "Join This Group"!



**Above:** On 10 May 1982, freshly overhauled No.22 was a centre of attention for young and old when it paused for inspection at Weston on the occasion of the last road trial of a 10 Class engine in regular SMR service. The origin of the slightly outsize second-hand chimney is betrayed by the relief marking 'D50', picked out in orange. Actually, the chimney from a 32 Class would have been a more appropriate replacement, being one of many patterns from those engines that were re used for the 10 Class. Photo: Robert Driver

**Below:** Fast forward to 2012 when SMR Nos.10 and 18 became the first engines in 30 years to be road tested on their old stamping ground. The SMR has undergone many changes in the intervening years, beginning with conversion to single track in 1982 and, most recently, the commissioning in 2011 of a new steel truss bridge that will carry the line over the future corridor for the Hunter Freeway to Branxton. Constructed on the approximate alignment of the former Down line, but on a higher elevation, the new span takes the weight of No.10 for the first time during a trial run to Neath on 24 February 2012. Photo: Robert Driver

