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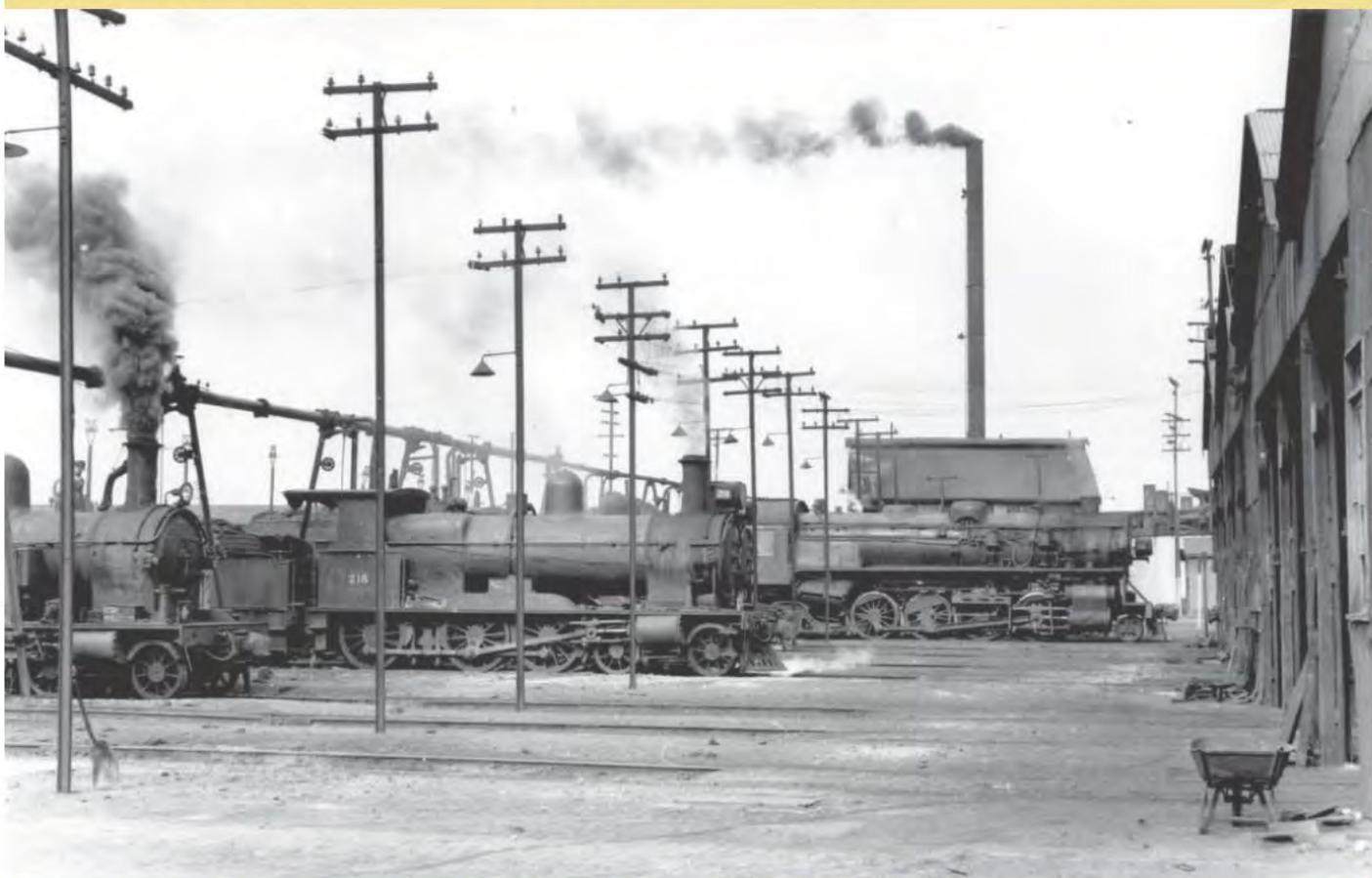
SAR LOCOMOTIVE DEPOTS

Their unique features and evolution

Journal of the Australian Railway Historical Society



Branchline diesel-electric locomotive 48161 and mainline unit 8118 at Broadmeadow Locomotive Depot on 14 March 1993. In his role as Superintendent of Locomotive Maintenance, Alan Parkinson was closely involved in supervising facilities such as this.
P GLEADALL PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 020728



SAR steam locomotives F Class 4-6-2T No. 170, Rx Class 4-6-0 218 and 700 Class 2-8-2 No. 706 stand beneath the overhead water line at the old Mile End straight sheds on Saturday 27 February 1956. No. 706 demonstrates the impact of the Webb era on SAR steam locomotives, while the depot boiler house dominates the background. Rodney Barrington's review of SAR locomotive depots commences on page 20. DOUG COLQUHOUN PHOTO

EDITORIAL

The New South Wales Labor Government's deal with the international contracting company Norton Griffiths in 1915 was designed to maintain an extensive list of railway construction projects at a time when the outbreak of World War I was diverting available funds to the Australian war effort. Initial work commenced on selected railway projects from June 1915, but the shortage of construction materials, stringent opposition to the deal by conservative politicians and the 1916 split in the Labor Party over conscription severely hindered the ability of the company to meet its obligations. The company's contract was terminated by the government in March 1917, with the Public Works Department completing the contracts in the post-war period. Neville Pollard assesses the implications of the Norton Griffiths saga, particularly its long-term implications for the NSW Railways.

Colin Bull's account of Alan Parkinson's railway career concludes with his transfer to head office in Sydney as Relief Locomotive Superintendent in January 1984. Alan had a rapid rise to Rolling Stock Manager for Freight Rail in 1989. This involved him in labour reform at the DELEC facility at Enfield and upgrading locomotive maintenance schedules. He played a key role in negotiations for the design and

construction of the 90 Class 2860kW locomotives for coal haulage in the Hunter Valley and the 82 Class 2260kW locomotives for inter-state freight haulage. Following the death of his wife in November 1993, Alan retired the following June.

Locomotive depots have had a special appeal to railway enthusiasts, particularly in the steam era. Rodney Barrington's account of the locomotive depots of the South Australian Railways was originally published for the 'Modelling the Railways of South Australia Convention' in 2003. This updated version is presented with additional photographs by the author and other sources. Rodney's cover image is particularly impressive.

Percy Suckling recalls a difficult journey as a young fireman on locomotive 3378 from Binnaway to Dubbo in October 1965 as our Explorer item this month.

Robert Ferro Kilup

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Cover Image: SAR streamlined 4-8-4 locomotive 524 blows down at Mile End Loco Depot as it prepares to haul the 6:52 Port Pirie passenger train on 3 November 1965. Rodney Barrington's account of SAR locomotive depots commences on page 20. **AUTHOR'S PHOTO**

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Letters: We publish a selection of letters depending on space allowances. Letters should be kept to around 250 words and preferably be sent via email.



Labourers pose for the camera prior to commencing work on the viaduct from Central Station across Belmore Park to Elizabeth Street in January 1921. N J THORPE COLLECTION, ARHSNSW RAILWAY RESOURCE CENTRE, 029797

THE NORTON GRIFFITHS SAGA

Misfortune or Mismanagement?

Neville Pollard

Let's imagine that a very large corporation offered the present government a deal to complete all outstanding railway projects and other public works within five years. The arrangement would include provision of a huge amount of capital to bring the projects to fruition. Imagine that there was a significant catch—the company wanted the work to be completed without going through a tendering process.

This actually happened in New South Wales (NSW) in the second decade of last century. This is the story of how the saga unfolded between the Holman Labor government and Messrs Griffiths and Company, also known as Norton Griffiths & Company (NG).¹

NORTON GRIFFITHS' INITIAL APPROACH

In February 1912 John Norton Griffiths, Member of the British House of Commons for Wednesbury (and a later World War I hero), announced he was visiting Australia in connection with his offer to construct the transcontinental railway at 7½ per cent above cost. The company expected that many other railway projects down under would soon fall to their lot.² John Norton Griffiths was the head of the London firm of Messrs Griffiths & Company Contractors, who at the time, had contracts totalling £14 million, including construction of the Benguela–Katenga trans-Africa railway, a nine mile tunnel in London (£700,000), a water supply project

in Baku, Russia (£2 million), the Mexico–Yucatan railway (£3 million), Chili [*sic*], the Argentine trans-Andean railway (£7,500,000) and construction work at St Johns Harbour in British Columbia (£425,000) to name a few.

The chairman of the company, Lord Howard de Walden, was said to be the biggest landowner in England after the Duke of Westminster. The company appeared extremely anxious to expand their influence into Australia; if they were successful they would construct a local steel works. A subsidiary company, Griffiths & Company Australia Limited, with Arthur Mayoh³ as its local representative, was established to promote the company's interest.⁴

This company did not tender for work, as would be normal (and expected) practice today, but carried out work for an agreed percentage above costs (known as 'cost plus').⁵ It was quite common for construction companies to complete work under this arrangement, at the time, simply because it was difficult to produce an accurate statement of costs as sophisticated exploratory equipment was not then available.

NEGOTIATIONS WITH THE NSW GOVERNMENT

Arthur Griffith (no relation to Norton Griffiths), the NSW Minister for Works in the Holman Labor government and after whom the town of Griffith was named, seems to have

been impressed with what NG had to offer and was anxious to get an agreement through parliament as soon as possible. His motivation was reflected by the following:

A careful observation of the conditions of our back country have convinced me of the urgency of devising some means of providing railway facilities very much more rapidly than is possible should we adhere exclusively to existing methods, while the growing demands for loan monies throughout the world are making it every year more and more difficult to obtain the necessary capital.⁶

The initial proposal between the company and the NSW government was that it be given £10 million worth of work, including North Shore (Sydney Harbour) Bridge, the Sydney underground and construction of the North Coast railway, to be completed within five years and in return receive payment in government securities at current rates.⁷ The cost of supervision was to be seven per cent. The company guaranteed to employ high class engineers, experienced staff and act as effectively as the current NSW Railway Construction Branch.

Griffith refused the offer citing these reasons:

- Payment by government securities might injure the financial standing of the state.
- Seven per cent was too high a commission especially when some key company personnel were to be remunerated by the NSW government.
- Commission should not have to be paid on purchase of land, construction plant, rails or bridge materials.
- The Department was not adequately protected if NG failed to carry out its work satisfactorily.

Subsequently Griffith renegotiated the agreement, which cabinet approved on 8 April 1913, as follows:

- Work would cover £3 million to complete the remaining sections of the North Coast railway, together with the Glenreagh–Dorrigo and Condobolin–Broken Hill lines.⁸
- Total supervision charges were reduced to 5 per cent.
- No percentage was to be paid on land and equipment.
- If the Director General of Public Works concluded that the work was not being completed satisfactorily, or expeditiously, the contract could be cancelled and only completed work remunerated.
- Any disputes were to be submitted to a board of arbitrators.
- Work was to be completed in 2½ years.
- Workmen were to be employed under the day labour system.

The following objections were raised in parliament:

- Work would be completed by one big firm without giving smaller (local) companies the right to compete for contracts.
- NG Limited would be paid on percentage of costs not on results. This would rely on much good faith and commitment on the part of the firm.

The increase of £1,500,000 per annum to borrowing may affect the price of other borrowings.

Griffith highlighted three advantages of the proposal:

- NG Limited had a good reputation worldwide.
- A group of financial backers, associated with NG Limited, would make it easier to raise necessary funds.
- Country railways would be completed in 2½ years rather than eight or ten.⁹

THE CENSURE MOTION

The leader of the Liberal opposition, Charles Wade, immediately moved a censure motion giving reasons at a meeting at Campsie on 22 August 1913:

... if the agreement is carried out the state will no longer be an employer of labour on public works, which are going to be handed over to this firm of so called bloated capitalists to do the work under their own control.¹⁰

Here Wade sounded more like a Labor politician than a free-market Liberal.

The debate on the censure motion promised to be lively; for dissention had also broken out in Labor ranks over handing over the state's public works to a private overseas company—this was definitely not Labor policy! A fierce denunciation of Griffith by a fellow Labour politician, John McGirr, Member for Yass, recorded in the *Herald* of 25 August 1913 illustrated the Party's mood:

... he [Griffith] has been well warned of the danger of this, and he knows that loyal Labour men are against it. Yet he has persisted in bringing it in; therefore he is no longer carrying out our platform, and should do the fair thing and resign at once.¹¹

Would this censure motion split the Government? In the end the motion was defeated by 40 to 34; both Premier Holman and McGirr voted against it. Some kind of agreement had clearly been stitched up in the government party room beforehand, or at least the Herald reporter thought so. Wade, however, did not come out totally unscathed either. On 20 September, Dorrigo residents burnt an effigy of the Leader of the Opposition, labelling it, 'weighed and found wanting,' in the centre of town watched on by 400 people; such was their indignation that he had hindered the construction of their promised line.¹²

The proposed agreement with NG, forged by Griffith, came to a vote on 3 October 1913.¹³ It was a lively and long session with much interjection with the final vote coming at 3am. In the end the whole debate melted away to nothing because the Premier 'did an about face' and announced he would vote against the Bill. The following sums up the charade:

A surprise was created by the Premier appearing as a hostile critic of the big proposal of his Works Minister and his declaration that he would vote against the ratification of the agreement settled it fate off-hand. The large section of the Labour Party reported to be in favour of the project wilted away as if by magic, and shortly after 3 in the morning when the debate closed, the Minister for Works found himself in a hopeless minority. The Opposition was more or less arrayed solidly against him...

When the Speaker put the question ... a few of the Opposition members ... called by way of a challenge to the disconsolate Minister for Works, "The noes have it," but Mr Griffith was in no defiant mood and so parlous did he regard his position as being that he did not even call for a division.¹⁴

Clearly the Minister for Works was 'down,' but as we shall see, 'not out!'

It is hard not to be sorry for Griffith, who, with great vigour, put his country before his party's platform. He knew a lot about the difficulties of the country, having represented the far western NSW seat of Sturt for a time after 1904.¹⁵ He reflected the new push for the development of

the country which later culminated in closer settlement schemes, albeit unsuccessful, on the NSW/Victorian border. He shared his passion, for reasonably rapid rural development; during a deputation from the Dorrigo area he stated:

The question of developing the country is something that ought to be considered purely on its merits. Some of our party are doubtful about the agreement [but] can we afford to leave great districts like Batlow, the Dorrigo, the Pilliga Scrub and other rich country without railway communication for a number of years. That is what we cannot afford to do. (Applause).¹⁶

It is hard to understand Premier Holman's reason for voting his own Minister down. He too knew the country well, being member for Grenfell and Cootamundra at various times, and was a noted supporter of railway construction. But there are further twists to this story.

THE NG AGREEMENT OF 1915

Following the outbreak of The Great War (1914–1918), overseas loans virtually dried up. With a number of railways under construction, including the North Coast Line, 'a mass of other railways' and considerable duplication works,¹⁷ a lack of funds would severely hold up these projects and affect the jobs of 18,000 men whose livelihood relied on an uninterrupted flow of loan moneys. To make matters worse, mine closures at Broken Hill, Cobar and other places threw another 3000 souls into 'absolute destitution'.¹⁸

During 1914, the Holman Labor Government attempted to obtain loans from two traditional sources, The Bank of NSW and The Commercial Bank; both of whom had attempted to keep the government supplied with funds after August 1914. The Prime Minister, Andrew Fisher, had also concluded negotiations to provide £7.4 million to NSW for the following twelve months. The remaining £2 million (sterling), required by NSW, would hopefully come from locally subscribed Treasury bonds. This finance would hopefully complete tramways, harbour works, the Newcastle dockyard, commencement of city railway, purchase of rolling stock, the Flemington–Glebe Island railway, Rozelle yards and associated harbour works, country railway stations and water supplies, irrigation works at Yanco and on the Murray and measures to improve the production of wheat.¹⁹

Holman received pessimistic advice from the Agent General in London; however, stating that if the war continued beyond 1916 there would be no further money to continue the state's public works. This was made abundantly clear in a cable from London on 22 November 1914 in answer to a question whether it would be possible for NSW to float a loan in England at this time. The reply stated categorically that such would be impossible no matter what kind of loan it was.²⁰ A further cable the following day suggested that if the state wished to continue its public works program it should consider entering into discussions with a contractor, Norton Griffiths being mentioned (The Agent General was not confident that they would still be interested), or make their own arrangements with a banker.²¹

On this advice Holman reopened negotiations with NG on 9 December 1914, dealings that he, as we have seen, had scuttled in an inappropriate manner the previous year (the 1913 election had been fought on the assumption that any agreement with NG was dead).²² Caucus, understandably, was still bitterly divided on the matter but dissent seemed

to die down somewhat after Holman's discussions with the Agent General were made public.²³ The Premier had planned to gain parliamentary approval for this new agreement but the Leader of the Opposition suggested that as members would then be privy to confidential information about the London money market it would be better for the government to make an executive decision on the matter.²⁴ Perhaps the real reason was that the Leader of the Opposition wanted the government to take full responsibility for the decision.

On 6 April 1915 the agreement was ratified at a Labor convention and signed 18 days later.²⁵ It was tabled in parliament on 28 July 1915 although details had been made known on 13 May.²⁶ The agreement included:

- £10 million was to be raised over five years by NG of which £4 million was to be found by 1917. In each successive year £2 million was to be raised.
- £10 million worth of public works was to be completed between 1 July 1915 and 5 November 1920 including:²⁷
- City railway and portions of eastern and western suburban railway to Bondi Junction and Weston Road Balmain;
- Broken Hill–Condobolin railway;
- Glenreagh–Dorrigo railway;
- North Coast Railway, Kempsey–Macksville;
- North Coast Railway, Macksville–Coffs Harbour;
- North Coast Railway, Coffs Harbour–Glenreagh;
- Dubbo–Werris Creek railway, section from Binnaway–Werris Creek;
- Stockinbingal–Forbes railway, Section 2;
- Wagga–Tumbarumba railway, section Humula–Tumbarumba;
- Sydenham–Botany railway;
- Enlargement of Main Canal, Northern Murrumbidgee Irrigation Scheme;²⁸
- Warragamba water conservation scheme;
- Chichester water conservation scheme; and the
- Coffs Harbour sea works.

The total cost of these projects was estimated to be £12,774,000 of which the government would be responsible for £5,870,000.²⁹ Note in the November 2008 issue of *Australian Railway History* (p359), it was incorrectly stated that the Borellan to Mirrool (Griffith) extension was also placed in the hands of Norton Griffith to complete. This was subsequently found to be incorrect.

- As underwriters NG would receive brokerage fees of 1½ per cent.
- Interest rate was set at 5 per cent. This was on the whole £10 million whether raised or not.
- A charge for supervising work was to be a further 5 per cent on all moneys expended.³⁰

With such a large amount of finance involved there was bound to be considerable disquiet. A letter from Charles Wade, Leader of the Opposition, provides a useful summary of concerns:³¹

- The state had to pay for the passage of company engineers from England and salaries for existing Public Works staff.
- Returns to NG were far too generous.
- An Australian contractor would have to tender and stand by that quotation. But if NG Limited exceeded government cost estimates they would still be paid 5 per cent on all monies spent up to £10,000,000.

- Cash payments to NG, including interest, underwriting and supervision charges, would amount to £2,100,000 in six years! Apparently the government, in addition, had to pay salaries of the NG engineers. NG also received additional commission for underwriting a £2,900,000 redemption loan floated previously.
- If such a large sum could be gained by a private business why couldn't the government float a similar loan?
- If the loan was coming from NGs reserves then why should NSW have to pay a fee for underwriting?
- If this contract is allegedly so lucrative why wasn't it opened to public tender with advertisements in the press?
- Eighteen months previously the government could not get support for this proposal from its own members; why did they now suddenly agree to it?
- The Agent General (see above) had given other financing options; why weren't these explored first?
- If this was classed as emergency funding then why was the agreement for five years? Why not only 12 months?
- How humiliating for NSW if a private company could secure these funds but the state couldn't.
- The program of day labour would now be supervised by a private company. What was wrong with our own engineers supervising the work?

EARLY WARNINGS AND A ROYAL COMMISSION

NG started work on the Glenreagh–Coffs Harbour section on 29 June 1915; soon there were concerns about lack of materials including scarcity of explosives; and steel.³² Then there were local contractors who were no longer able to tender for work.³³ The Newcastle steel works was also unable to supply the contracted 700 tons of rails per week; it was also said that on the Broken Hill–Menindee line there were 55 miles of completed earthworks awaiting rails.³⁴

Charles Wade continued to wage a relentless tirade against the conditions of the agreement;³⁵ as this kind of scheme was just what an opposition needed to rattle the government. The NG scheme did, however, bring the government a little consolation by maintaining higher levels of employment than would have otherwise been the case.³⁶ For that reason the measure could perhaps be described as an early form of a stimulus package.

On 29 March 1916 a Royal Commission opened into allegations relating to the proposed state monopoly of the petrol industry.³⁷ Whilst these matters are out of the scope of this essay it is of note that Arthur Griffith was called to give evidence that he might have acted corruptly in the matter. So sensitive was the NG contract, at the time, that there was innuendo that Griffith might have acted corruptly in this current matter too:

[To Griffith] is there any truth whatever in the statement ... in that letter to London to the effect that £65,000 was paid to Ministers in connection with the Norton Griffiths scheme? – Absolutely none.

The Royal Commission subsequently cleared Griffith of any wrongdoing.

THE CRISIS DEEPENS

In May 1916 it was announced that NG had taken over two sections of the city underground railway, namely Central–Hyde Park and Circular Quay–St James.³⁸ Two weeks later the city project was postponed because much needed machinery could not be obtained for at least nine months. Not even simple excavation machinery was available because foundries were preoccupied with manufacturing munitions.³⁹

This was denied by the Minister for Works (now Mr Cann) who contradicted NG's assertion of shortages of materials.⁴⁰ The slowness of completion of the North Coast contracts, also a cause for concern, were put down to the



Construction workers preparing the trackbed at Megan on the Glenreagh to Dorrigo Line circa 1915.

N J THORPE COLLECTION, ARHSNSW RAILWAY RESOURCE CENTRE, 037508



Former NSWGR 0-4-2 M36 Class locomotive No. 78 as Public Works Department locomotive No. 13 during construction work on the Glenreagh to Dorrigo line. It was returned to the NSWGR in 1917 and was plinthed at Enfield loco depot in June 1928.

N J THORPE COLLECTION, ARHSNSW RAILWAY RESOURCE CENTRE, 022731B

war effort, day labour strikes and the difficult terrain of the country.⁴¹ In November 100 men were paid off on NGs Condobolin–Broken Hill contract because of shortage of coal for the construction locomotive.⁴²

On 15 November 1916, Premier Holman crossed the floor over the conscription issue joining the conservative Nationalist party as Premier. In a censure motion a few days before, the disintegrating Labor party turned on Holman and others who had left its ranks. Debate turned very bitter. Holman was accused of stacking the Labor conference that had approved the NG scheme back in 1915 which McGirr described as, “the most corrupt and infamous [agreement] that had been foisted upon a country’ and ‘the most villainous proposal ever entered into”. He went on:

I pledge my reputation on the statement the Norton Griffiths people never brought £1, or even an office chair, to this country, and that they are using Works Department machinery, and at the same time commissions are being paid on everything bought, and 5 per cent goes out to men who are wheedling their way into all sorts of posts.⁴³

There were also bitter accusations about which members had actually voted for the NG agreement at the conference. In the meanwhile, the new Nationalist government made contact with NG’s London office with a view to termination.⁴⁴

In mid-December, due to shortages in the money market, Joseph Mayoh announced that works would cease on

the Coffs Harbour–Glenreagh section putting 1200 men out of work nigh on Christmas. A further 60 men on the Binnaway–Coonabarabran line were also retrenched.⁴⁵

On 1 January 1917, a new Railway Act came into force which created the post of Chief Commissioner and transferred railway works from the Public Works Department to the Railway Commissioners. The Commissioners immediately set about to curb costs by stopping work on 234 miles of line and setting up measures to increase productivity.⁴⁶ Mayoh retorted that the government’s intention to complete the contracts itself was, ‘all nonsense’.⁴⁷ By early February, work had stopped on the Marrangaroo (Bowenfelds) deviation near Lithgow.⁴⁸

Relationships became even more strained; the government claimed that NG had not kept their side of the contract, as only half the stipulated amount of work had been completed. Mayoh countered that the government had not supplied necessary materials. The matter of payment of commission also continued to be a running sore.⁴⁹ Finally, in mid-April 1917, the government made an offer to NG to terminate the existing contract and stop work on the Macksville–Raleigh, Coffs Harbour–Glenreagh, Glenreagh–Dorrigo and Binnaway–Werris Creek lines. Reason for termination and renegotiation was reported to be lack of finance but Mayoh thought that it was a matter of getting rid of the company at any price even if, as a result, 2000 souls were thrown out of work.⁵⁰

The present contract was terminated

on 28 March 1917.⁵¹ Following is a useful summary of reasons:

... circumstances made it impracticable to expend the amount contemplated by the agreement. Not only had delay been occasioned by the difficulty in obtaining plant from abroad, but the government had been quite unable to obtain rails and structural steel for bridges in anything like the quantities required to keep the work going at the rate necessary. The government was faced with the possibility of having to provide more work and money for Norton Griffiths and Company, while at the same time it was compelled by necessity to reduce expenditure by closing down the works.⁵²

A new agreement, skilfully and laudably negotiated by R T Ball, Secretary for Works and Minister for Railways, provided for:

- Handing back responsibility for supervision of construction to the government. This would save 5 per cent on all future moneys spent.
- The 5 per cent interest would only relate to the amount of money actually raised and not the full £10 million reducing the cost to £360,000 of which £65,000 had already been paid.
- NG Sydney offices would be closed saving £50,000 per annum.
- NG staff would be assimilated, where possible, others would return to England.
- Works to be completed by the government were:

Sections 6, 7, 8 of North Coast railway, Kempsey–Glenreagh, Glenreagh–Dorrigo, Humula–Tumbarumba, Broken Hill–Menindee, Condobolin–Menindee, Werris Creek–Binnaway, Forbes–Stockinbingal, Coonabarabran–Burren Junction (constructed to Gwabegar), Bowenfels deviation, Barmedman–Ranken (sic) Springs, Canowindra–Eugowra, Griffith–Hillston, Gilgandra to Collie (not constructed) City Railway, Sydenham–Botany, Coffs Harbour improvement works, Homebush Saleyards and Railway Loop.⁵³

In the case of the Barmedman to Rankin’s Springs and Griffith to Hillston lines (and perhaps others)



Construction work on the Central to Goulburn Street viaduct for the City Railway photographed on 30 March 1924.

ARHSNSW RAILWAY RESOURCE CENTRE, 018207

R T Ball was able to obtain loans from the Federal government to finance so called, 'repatriation lines'. In total it was estimated that these changes to the agreement would ultimately save the government up to £3,870,000.⁵⁴

Ructions continued: the Labor Opposition attacked the Government for breaking the NG contract (remember that the Labor government had signed the original agreement).⁵⁵ The Inspector General's Report, tabled in Parliament in early September, condemned the NG operations on the grounds of cost and duplicating existing resources of the Public Works Department.⁵⁶ The Auditor General's Report was similarly condemnatory.⁵⁷ Claim and counter claim continued on and off until around the middle of 1920.

THE AGREEMENT IN RETROSPECT

Why did the contract fail? The answer appears to be simply because it was enormously large, expensive and funded by a scheme that had no mechanism to keep costs in check. A constant stream of raw materials was required to keep a dozen different sites operating at one time. A country on a war footing, and still largely undeveloped, just could not meet this challenge.

The Labour government was probably naïve and hasty in coming to a conclusion that such a scheme would work. With no evidence of corrupt practices we must conclude that they were motivated by a genuine desire to open up the state as quickly as possible and maintain full employment. Nevertheless, the nature of the scheme was ready made for an opposition who opposed it at every turn, providing

journalists with copious amounts of anti-government fodder. Finally when the scheme could no longer guarantee employment it was terminated.

The question of which lines were completed by NG is not an easy question to answer; while this article includes lists of lines that were handed over to NG and later taken back by the government there appear to be inconsistencies. Interestingly Stuart Sharp points out that while NG were undertaking work on the North Coast line, day labourers engaged directly by the Department of Public Works were completing the steel bridges over the Hastings and Macleay Rivers.⁵⁷ In the end, the Bowenfels deviation might just have been the only railway work completed outright by the company. Further research may prove otherwise.

LONG TERM EFFECTS OF THE SAGA

The Norton Griffiths saga reverberated through railway culture long after 1917. I am indebted to Stuart Sharp for his willingness to share these insights as follows:

From mid-1914 until 1916 the decision was made to spend less money on platforms and platform buildings. In place of platforms, there were merely name boards; in place of station buildings, there were merely 'shelter sheds', without platform awnings. As far as can be seen, the only lines where this policy was implemented were Troy Junction to Binnaway, Stockinbingal to Forbes, Muswellbrook to Sandy Hollow and at Humula. At some places, residences and weighbridges were omitted but there were some exceptions. On other lines, such as the North Coast,



On 20 September 1913, Dorrigo residents burnt an effigy of the Leader of the Opposition, Charles Wade, in the centre of town that was watched on by 400 people. This was in retaliation for moving a secure motion that would hold up the building of the Glenreagh to Dorrigo railway and place in jeopardy the Norton Griffiths contract. This image of the terminus was taken in September 1985 after services had been suspended.

NEVILLE POLLARD PHOTO

there were no obvious changes to the pre NG position. It was probably the Public Works Department who set the design standards for the time and they knew that funds were extremely limited.

The NG contract (and World War I), in many ways, marked the change between the old NSW Government Railways (NSWGR) and a new NSWGR. Pre NG, the railways were a progressive organisation that engaged the private sector for a wide range of help and ideas, including the supply of modern workshop machinery. It seems that the NG contract ended that relationship; from that time, the NSWGR relied on its own organisation to make virtually everything required. The NG contract was used by Labor to demonstrate how the private sector could not be trusted. Labor further despised the private sector when the 1917 strike was conducted over so-called scientific work methods. This led to Jack Lang and the socialist policies of the 1920s.

In essence, the NG contract was a very important step towards union control of the railways, which largely continues today.⁵⁸

END NOTES

1. In earlier newspaper articles the company seems to have been known as Messrs Griffiths and Company. Later the company is referred to as Norton Griffiths and Company. Note *SMH*, 2 July 1915, p10.
2. *Sydney Morning Herald (SMH)*, 9 February 1912, p9.
3. *SMH*, 5 June 1913, p9; *The Christian*

name 'Joseph' is mentioned for Mayoh in later *SMH* articles.

4. *SMH*, 5 June 1913, p9; 18 November 1914, p10.
5. *SMH*, 21 August 1913. pp9–10.
6. *SMH*, 2 April 1913, p8.
7. The *SMH* of 12 November 1914 (p8) stated that building of a section of the Sydney underground and some harbour works were also included in this agreement.
8. *SMH*, 21 August 1913, pp 9–10.
9. *SMH*, 22 August 1913, p9; 23 August 1913, p19.
10. *SMH*, 25 August 1913, p9.
11. *SMH*, 23 September 1914. p9.
12. The *SMH* of 25 March 1916, p18 states that the vote was taken on 2 October 1913.
13. *SMH*, 3 October 1913, p5; 4 October 1913, pp19–20.
14. Online: <http://adbonline.anu.edu.au/biogs/A090112b.htm>; Accessed October 2010.
15. *SMH*, 23 September 1913, p9.
16. *SMH*, 13 November 1914, p6.
17. *SMH*, 13 November 1914, p6.
18. *SMH*, 13 November 1914, p6.
19. *SMH*, 6 April 1915, pp9–10.
20. *SMH*, 6 April 1915. pp9–10. Further information on the dialogue between the government and the Agent General in London was provided in *SMH*, 9 July 1915. p8.
21. *SMH*, 12 November 1914, p8; *SMH*, 15 June 1916, p7.
22. *SMH*, 14 November 1914, p11.
23. *SMH*, 9 December 1914, p11; 10 December 1914, p10.
24. *SMH*, 25 March 1916, p18.
25. *SMH*, 30 July 1915, p10; 14 May 1915, p8.
26. *SMH*, 23 June 1915, p12; 30 July 1915, p10.
27. *SMH*, 14 May 1915, p8. The full Agreement was also published in this edition.
28. Eug W Hine: *A Parliamentary Veteran: The Honourable Richard Thomas Ball*. Corowa Free Press 1937, p12.
29. *Ibid.*, pp12–13
30. *SMH*, 8 April 1915, p8.
31. *SMH*, 30 June 1915, p12; 21 July 1915, p9.
32. *SMH*, 22 September 1915, p12.
33. *SMH*, 1 February 1916, p8.
34. For example, *SMH*, 2 February 1916, p14.
35. *SMH*, 17 March 1916, p5.
36. Online <http://investigator.records.nsw.gov.au/Entity.aspx?Path=\\Agency\4943> accessed October 2010. Readers are directed to the many articles relating to the subject in *SMH* during the period of the Royal Commission.
37. *SMH*, 17 May 1916, p12.
38. *SMH*, 30 June 1916, p16.
39. *SMH*, 1 July 1916, p12.
40. *SMH*, 3 August 1916, p6.
41. *SMH*, 23 November 1916, p8.
42. *SMH*, 10 November 1916, p8.
43. *SMH*, 16 December 1916, p14.
44. *Ibid.*
45. Gunn, John, *Along Parallel Lines: a history of the railways of NSW*. 1989, Melbourne University Press; pp 281–283.
46. *Ibid.*
47. *SMH*, 6 February 1917, p7.
48. *SMH*, 1 February 1917, p6.
49. *SMH*, 19 April 1917, p6.
50. Public Works Annual Report for year 1916–1917, p8.
51. *SMH*, 1 May 1917, p6.
52. Eug W Hine, *op cit.*, p13.
53. *Ibid.*
54. *SMH*, 19 July 1917, p8.
55. *SMH*, 7 September 1918, p13.
56. *SMH*, 25 September 1918, p12.
57. Dr Stuart Sharp, personal communication, May 2015.
58. Dr Stuart Sharp, personal communication, October 2010.



Overview of the service area at DELEC with a 45 and 4436 on the two through casual inspection roads not scheduled for regular maintenance. The locomotives on the third row are receiving more intensive scheduled inspection and maintenance in this March 1971 photo. NSWGR PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 022288

ALAN PARKINSON'S STORY

Part 4: To Senior Management

As told to Colin Bull

On 23 January 1984, Alan reported to the Chief Mechanical Engineer's Office to begin his work as a Relief Locomotive Superintendent. This would prepare him well for his appointment four years later as the Rolling Stock Manager of the NSW Railways' Freight Rail Division. The previous day had been Alan's last as District Locomotive Engineer at Valley Heights; the Depot Alan had spent almost 30 years developing into a major electric locomotive and wagon repair facility.

RELIEF SUPERINTENDENT

Alan applied for a Locomotive Superintendent position in 1983. Managers received notices calling

for applications for the four vacant Superintendent positions of, Outdoor Rolling Stock, Northern District, Southern District, and Relief. After Alan's application was vetted by the Superintendent General and the Chief Mechanical Engineer (CME) Alan was offered the position of Superintendent Relief.

When Alan arrived at the CME's office on his first day as Superintendent, he was assigned to relieve the Superintendent for Irregularities who was taking a training course. This position enforced the accountability of all staff maintaining locomotives and rolling stock in the depots.

The Superintendent for Irregularities took the final decisions on responses to failures of workmanship or behaviour in the depots. A foreman would seek an

explanation from an employee charged with a performance failure and then make a recommendation for punishment to the Depot manager, who in turn would make a recommendation to the Superintendent for Irregularities. Recommendations for punishment could range from no action to fines, suspensions, loss of grade and dismissal. Permanent changes to an employee's employment status such as loss of grade or dismissal required the approval of the Chief Mechanical Engineer. Employees had the right to appeal any decision to the Railways Appeal Board.

Alan's next relief appointment was to relieve the Metropolitan Superintendent, who was responsible for the Enfield, Eveleigh, Valley Heights, Port Kembla, Gosford, the

XPT and Air-Conditioned Trains (ACDEP) depots, together with responsibility for Central Motive Power Control. Initially, he was ill-at-ease taking this relief because he would be supervising managers at Enfield who had unsuccessfully applied for Alan's position. However, there was no ill will, with Alan explaining: "they were fine and congratulated me".

This Metropolitan relief was a valuable learning experience for Alan. While his previous relief as DELEC manager gave him an appreciation of the problems associated with maintaining the diesel locomotives, visits to the other depots gave him a sense of the enormity of the problems the depots were facing. These covered all areas; staff, unions, supervision, facilities, and equipment. For example, the men at the Port Kembla wagon siding would drop tools and walk off the job at the drop of a hat, as the working conditions were poor and pay was less than wages at the nearby steel works.

All wagon repairs were carried out in the open in all weathers with no cover at all. Alan understood the discontent but, as a relief Superintendent, he was not in a position to bring about any changes.

Alan's next relief at Goulburn while the South Superintendent was on a study tour of US railroads brought new learning opportunities. He stayed in the Superintendent's railway supplied home and set about familiarising himself with Southern region depots at Cootamundra, Junee, Albury, and Temora, as well as Goulburn. At Cootamundra, the manager reminded Alan how he 'stole' the depot's gantry crane for Valley Heights and at Albury he caught up with the DLE who preceded him at Valley Heights!

Alan found the depots very well run even though they had to make do with facilities built for the steam era with only limited modifications for the maintenance of diesel locomotives. Alan had to suppress his urge to repeat his Valley Heights doing approach and suggest improvements to others. He was reluctant to suggest changes, which could possibly bring the wrath of senior management down on the manager's head, so he concentrated on providing support and not interfering in the management practices. The future of the depots was the constant inquiry put to Alan by the staff. The employees were expecting depot clo-

tures and were very concerned about their future employment. Alan could not provide any information, however, as the policy of the Labor Government was to keep the depots open to maintain employment. Consequently, the future of the depots was a matter for the government rather than the department.

The Northern Region was Alan's next relief when its Superintendent was on a study tour of Amtrak and the Burlington Northern Railroad in the United States. The Northern Region included depots at Broadmeadow, Port Waratah, Werris Creek, Armidale, Casino, and Yeerongpilly. In addition to supervising these depots, Alan had to address staffing difficulties. The manager at Broadmeadow explained to Alan that the depot needed extra fitters and electrical mechanics to handle the extra work resulting from the introduction of the 81 Class locomotives. However, the manager could not obtain approval for additional staff by applying through the normal Departmental channels.

Alan took advantage of a forthcoming Commissioner's tour to put the problem to David Hill and Ron Christie the newly appointed Chief Executive of Operations. Alan had determined that two extra fitters and two electrical mechanics were needed, but he ran into opposition from Ron Christie who said: "Is this all you can ever think of, at Valley Heights you did the same thing!" Alan came back with: "This matter has been carefully thought about, but if you doubt me,

bring in your experts to challenge my request". David Hill then intervened and granted Alan's request with Broadmeadow being allocated an extra two fitters and two electrical mechanics.

Union negotiations also occupied Alan's time in the Northern Region. His relief coincided with the 1984 strike by locomotive crew over the removal of guard's vans from freight trains. This left locomotives needing service, stranded throughout the Northern Region. Alan contacted Bernie Willingale, the State Secretary of the AFULE (Australian Federated Union of Locomotive Enginemen). Alan explained how the strike was disrupting the locomotive maintenance program. Willingale was initially reluctant to assist the Department in the dispute. However, Alan pointed out that if locomotive maintenance was held up there would be a shortage of locomotives when the dispute was settled. Willingale could see Alan's point and arranged for locomotives to be rotated through the depots during the strike.

ACDEP APPOINTMENT

Perhaps it was Alan's staff management successes, which prompted David Hill to appoint Alan to the Air Conditioned Trains Depot (ACDEP) to resolve the staff problems plaguing the Depot. This depot was built in 1968 on the site of the demolished Eveleigh steam running sheds built in 1880. The depot housed and maintained the air-conditioned cars of the locomotive hauled



A view of the interior of the ACDEP facility at Eveleigh in the late 1970s.
B COX COLLECTION, ARHSNSW RAILWAY RESOURCE CENTRE, 030267A

long distance trains, such as the *Southern Aurora*, *Brisbane Limited*, *Indian Pacific*, and the daylight expresses that served regional centres.

By 1986, ACDEP was experiencing considerable difficulties with staff problems, inter-union and demarcation disputes, as well as regular equipment failures. One Saturday morning, when Alan was mowing the lawn at home, his wife received a phone call from David Hill asking her to bring Alan to the phone. Alan relates the conversation:

David asked: "What are you doing tomorrow?" when I said nothing special, he responded: "Well you are now, be at ACDEP at 9am." Alan recalls:

On arriving at ACDEP the following morning, I entered the conference room to find union organisers and delegates, the depot manager, and David Hill. David opened the meeting by saying: "I assume you have all met Alan Parkinson. I am commissioning him to be the new Regional Air-conditioned Maintenance Manager from today. I am giving him six months to clean up this current mess or I am closing the place down. David got up and left the meeting, dressed to go to the beach, leaving me to deal with the meeting in uproar".

Over the next couple of weeks, Alan arranged office accommodation and staff for himself and began meeting with managers and union representatives. These meetings established that there was discontent across all staff groups, which included the Train Equipment Examiners (TEE) who travelled on every train to correct faults, the diesel fitters who repaired the power van engines, and the carriage cleaning staff. Alan set up meetings with each of these staff groups to hear their grievances. These were:

- Insufficient staff causing all staff to work additional shifts each week;
- Equipment failures as a result of the age of the cars;
- Power vans overdue for engine changes;
- Rough riding as a result of cars needing bogie changes.

In response, Alan offered the staff a deal. He would recommend the allocation of additional depot staff, together with extra funding to up-grade the equipment, if the staff would guarantee a performance level of at least 80 per cent of train availability. Alan reminded the staff of David Hill's threat of closure, and he prepared his monthly report on the depot's performance with recommendations for improvement when he travelled to his property at Byron Bay on the *Gold Coast Express*. David Hill reluctantly accepted Alan's proposal and the depot management and staff worked with Alan to resolve most of the problems by June 1987.

The CME was impressed with Alan's resolution of the problems at ACDEP. He therefore, considered him to be an ideal Mechanical Branch representative on the Authority's new Equal Employment Opportunities committee, particularly since Alan had 500 female cleaners on his staff. Alan did not find the committee meetings very productive as the procedures proposed did not seem to improve the informal procedures already in place, as he explains:

On one occasion, a female cleaner asked to see me to discuss what she called "a delicate matter". She explained that one of the young Greek cleaning ladies had "been molested" by a young Italian male. She went on to say though, that she did not want me to interfere in the matter as "we have fixed him". When I asked what had been done, she explained that several of the ladies had removed his clothing, greased, and then feathered

him completely. They then took him to a nearby suburban station and let him go in the middle of the night! When the offender complained to the management, he took up the offer to transfer to another depot.

SUPERINTENDENT LOCOMOTIVE MAINTENANCE

By June 1988 and with ACDEP now running successfully for 12 months, Alan was appointed Superintendent Locomotive Maintenance. This followed a 10-day study tour of the railways in Victoria, South Australia and Western Australia looking at their diesel locomotive maintenance programs. When Alan took up his appointment, he found that the Assistant Chief Mechanical Engineer had conducted a survey of the state's depots to determine which could be closed. One of his first tasks in this position was to advise those depots threatened with closure, including Valley Heights.

In October 1988, Alan received a phone call from the CME advising him that the new Coalition Government had decided to close the Valley Heights Depot. Furthermore, the new Minister for Transport, Bruce Baird, had requested that Alan be present when the Minister announced the decision to the Valley Heights staff, union representatives and the local Members of Parliament. Alan was present at 10am on the appointed day when the Minister visited the depot, made the announcement and left, leaving Alan and his old staff to deal with the stress and sadness. On returning to Sydney, the new CME, Bill Casley, suggested Alan assign his new assistant to carry out the winding down of the depot. Alan's long-time foreman fitter at Valley Heights, Harry Cross, closed the depot gate for the last time at the end of December, 1988. After a lot of work by local residents and members of the NSW Rail Transport Museum, the former depot now operates as the Valley Heights Locomotive Depot Heritage Museum.

As well as the unpleasant duty of closing his beloved Valley Heights Depot, Alan was also 'sacked' as Superintendent Locomotive Maintenance. On this occasion, Alan found himself called upon to relieve the CME when both the CME and his Assistant were on sick leave. One of the CME's duties was to attend daily early morning meetings with the Commissioner, David Hill, to report on the previous day's train delays and associated locomotive, signal and track faults. Alan describes the experience of his first meeting:

As the meeting commenced I could see that David was becoming more agitated with each problem raised. When I presented the number of locomotive failures, he quickly realised that I was not the CME "Where is the CME", he asked. I explained that both officers were on sick leave. His response was, "So they ought to be, look at how many locos are not available". He then went into an absolute rage, jumped onto his desk and yelled at me, "Just how bloody incompetent are you? Eighty locomotives not available, you are sacked, effective immediately."

I immediately picked up my papers, excused myself and walked out of the meeting, to the amazement of the remaining officers present. I returned to my office at 509 Pitt Street. When I arrived, my clerk advised me that David Hill had just rung and asked me to call him back. On contacting him, he told me to return to his office for lunch to discuss the loco fleet problems.

On arrival at his office in the York Street Transport House, he



The roundhouse at Valley Heights Locomotive Depot following closure in 1988. VALLEY HEIGHTS LOCOMOTIVE HERITAGE MUSEUM PHOTO

told me that he did not realise that I would react so quickly to his comments about sacking me. I said, "When told that you 'are sacked immediately' I thought it best not to wait as we are both inclined to be 'hot heads'". He replied, "I applaud you for standing up to me in one of my many rages". He was well known for responding to problems in such a manner. He settled down and we parted as good friends (at least until the next time!).

FREIGHT RAIL

The Greiner Coalition Government, elected in March 1988, wanted to change the then Public Service structure of State Rail to one based on a private business model. Ross Sayer, the new CEO of the State Rail Authority contracted the US management-consulting firm of Booz Allan & Hamilton to report on how this change could be achieved. The report recommended the closure of many country lines, the abolition of country passenger services, and the loss of 8000 jobs. The report also recommended dividing State Rail into four separate business units to be run on a commercial basis.

This new business structure would be comprised of City Rail to run metropolitan passenger services, Countrylink to provide country and interstate passenger services, Freight Rail to conduct freight services, and a Property Group to handle real estate.

In August 1988 the Chief Mechanical Engineer at the time, Bill Casley, rang Alan and told him that as a result of the restructure all Branch Head positions were to be abolished. However, Alan was to be offered a management position in the new structure and Bill

Casley told Alan that he was to report to the State Rail Head Office for an interview. The next day at Transport House, Alan was shown into the Board Room to be interviewed by Ross Sayers, State Rail CEO, Vince Graham, Freight Rail General Manager, and Hollis Henderson, a Booz Allen & Hamilton consultant.

After a friendly greeting, Ross Sayers immediately offered Alan the position of Locomotive and Rolling Stock Manager. Sayers explained that they were aware of Alan's ability to "get things done" and wanted to utilize this ability in the new Freight Rail organisation. When asked for his ideas on improvements, Alan explained that his "ultimate aim would be to raise the daily availability of locomotives to 90 per cent". Alan also said that if he accepted the position he would like to select his staff. This request was granted, and it was explained to Alan

that he would be required to answer to General Manager Vince Graham, co-operate with Bob O'Loughlin the Metropolitan Operations Manager, and be advised by Hollis Henderson.

Alan spent the next few weeks arranging an office, establishing his staff and working with Hollis Henderson to draw up his performance indicators for approval. Before joining Booz Allen & Hamilton, Hollis Henderson was a locomotive maintenance manager with the United States railroads Burlington Northern and Amtrak. Burlington Northern Railroad was formed in 1970 with the merger of four railroads running from the Midwest to the Pacific North West of the United States. It had 38,000 kilometres of track and over 2000 diesel locomotives. Amtrak is a US Federal Government agency, which took over the running of the failing US long distance passenger train services in 1971. It had 500 diesel and electric locomotives and ran 300 trains per day over 34,000 kilometres of track.

Hollis Henderson had regular meetings with Alan advising him how he could achieve 'world's best practice' in labour, resource, and management productivity. The result was Alan's five-year plan:

Labour

- Review staffing levels obtaining reductions and productivity increases;
- Reduce high incidence of OH&S related time lost and other absenteeism;
- Introduce cost effective work pro-



Diesel-electric locomotives 4443, 4471, 4473 and 4717 stabled at the Lithgow Locomotive Depot on 16 July 1979. ARHSNSW RAILWAY RESOURCE CENTRE, 117518

cesses at Maintenance Centres;

Resources

- Downsize locomotive fleet to reduce maintenance costs;
- Introduce strategies to increase locomotive reliability and availability;
- Review wagon maintenance procedure;

Management

- Improve management controls to ensure compliance with Group standards, regulations and objectives;
- Operate within approved financial constraints;
- Introduce more cost effective management process at Maintenance Centres.

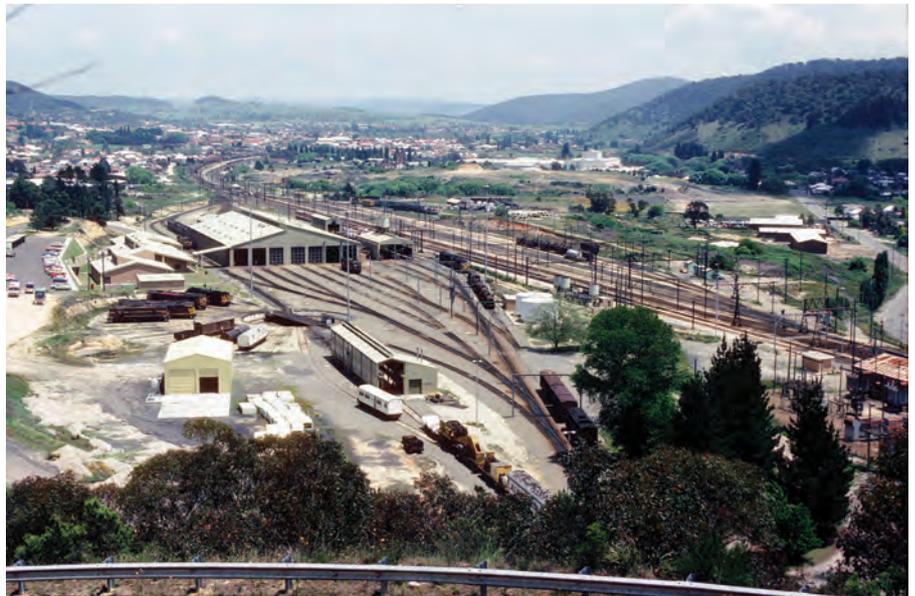
LABOUR REFORM

Alan began his task of increasing labour productivity by changing the work practices at DELEC, the main locomotive depot at Enfield. He noted:

During my previous years relieving at Delec, I observed many problems that I considered needed to be addressed. These were mainly bad habits which had been allowed to happen under the threat of Union unrest. One of the worst things that previous Managers had allowed to happen was allowing the staff to build 'cabins' beneath the work area elevated platforms, one for fitters and one for electricians. These 'cabins' or 'tombs' as they were known, were fitted with lounges, fans, heaters, and microwave ovens. The 'arrangement' was that when the number of locomotives coming in for service was low, half the staff would attend to the work while the other half would relax in their tomb.

Dismantling the structures was going to take some planning, as Alan was sure the staff would offer formidable resistance. A number of the staff members were old adversaries who were antagonistic towards Alan when he was a fitter at Enfield Loco (steam) and seeking promotion as a District Locomotive Engineer. The DELEC Manager was Noel Fields, who Alan had specifically appointed because he considered him formidable enough to sort out DELEC's problems.

The plan Alan and Noel devised entailed having the Fire Brigade condemn the 'tombs' as fire hazards and



An overview of the Lithgow Locomotive Maintenance Depot in November 1987. Note the locomotives stabled at the turntable to the left, previously the former steam locomotive roundhouse site. A S HAYNES PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 077781

replacing them with a room fitted out with tables and chairs, heating and cooling, hot water supply, and a microwave oven. Alan wanted the room built 'on number one road, opposite the foreman's office and connected by phone, with a complete glass window area for easy observation as to who was in the room'.

DELEC union delegates and their respective union organisers were invited to a meeting for Alan and Noel to outline the plan. The DELEC delegates were hostile and against the change, but the union organisers were able to persuade the delegates to accept the plan on the condition that the 'tombs' would not be removed until the new accommodation room was ready for use.

Once Alan had the 'tombs' cleaned out he then set about increasing the work load of the staff. He increased the fleet allocation at DELEC from 112 to 168 by relocating locomotives from country depots such as Junee. More space was needed to accommodate the extra work so he removed the old disused wheel lathe out of the shed beside the main building, filled the hole with concrete and fitted out the shed to change engine heads and auxiliary motors. Incidentally, the author operated this lathe as an acting turner in the last year of his apprenticeship in 1963!

One extra shed was not sufficient accommodation so Alan reallocated all the electric locomotive maintenance from DELEC to Lithgow. This released extra roads at DELEC for diesel locomotive maintenance. To make sure all the

staff was present for this extra work, Alan decided to fence in the staff car park, as there had been too many cases of staff being AWOL during working hours to frequent the Belfields Hotel! These changes brought about a 34% increase in the output at DELEC without increasing staff numbers. Alan's report to Vince Graham after these changes stated: "one job complete and many more to come".

The Lithgow depot had been rebuilt in 1984, and it took over the maintenance of the Bathurst diesel locomotive fleet when that depot closed. By providing the depot with a new manager, Warren Kennedy, three additional staff, and some extra equipment, Alan set the depot up to efficiently maintain the electric and western diesel locomotive fleet independently of DELEC. This was confirmed when the depot received an award for: 'World's best practice'.

However, Alan wanted the cost of the additional staff at DELEC and Lithgow to be offset by a reduction in tradesmen's assistants. He explained to his managers at DELEC and Lithgow that the time had come when the practice of each tradesman having an assistant had to be addressed. Instead, Alan wanted the 'one for one' system replaced with a small central pool of assistants available for the foreman to assign to tradesmen as the need for assistance arose. While the managers agreed with Alan's proposal, they asked: "how are you going to achieve this without an uproar?"

The strategy Alan followed was

to begin by inviting the union officials who covered the tradesmen, to a meeting in his Parramatta office. The union officials agreed to Alan's proposal provided employees who lost their position were offered a redundancy package and extra tradesmen were employed. Alan agreed to an extra four fitters and four electrical mechanics at DELEC, and an additional two fitters and two electrical mechanics at Lithgow. Plans were made for a meeting the following week to put the agreed change to the officials of the union covering the trades assistants and the union representatives from the depots. As predicted by the managers, this second meeting resulted in uproar. It became quite acrimonious as Alan relates:

The usual dissatisfaction was demonstrated. One Union Delegate who had worked with me in the old steam shed said outright, "What else are you going to wreck? It is obvious to me that this ship is sinking". I said: "I doubt this because the rats are not leaving."

After a two-hour break to talk to their union officials, the staff representatives eventually agreed to the proposed change on the understanding that a redundancy package would be available for those who lost their position.

The next day Alan reported his success:

As I entered the office of General Manager Metropolitan, he was not in a receptive mood saying: "I have been hammered by Head Office, so far you have not produced any staff cuts as you promised." I replied, let's have a coffee and I will tell you just what has been achieved. I went on to explain that the respective unions have agreed to 150 to 180 staff reductions. He could not believe my news, apologising for his irritation.

Another part of Alan's strategy to increase labour productivity was to attempt the introduction of multi-tasking. One of his first observations of this practice occurred at the Cockatoo Island docks in Sydney Harbour. The shipyard's General Manager requested the Railway's help in solving the problem of cylinder liners failing in Oberon submarines. The submarines had General Motors (GM) diesel engines similar to the engines in the NSW Railway's GM locomotives. Alan and Foreman Fitter, Noel James, visited the shipyard to inspect the problem. It turned out that the submarines were shutting down when the chrome coating on the cylinder linings flaked off. The Authority had experienced similar problems with the GM locomotives and had identified the problem as poor liner preparation to receive the chrome coating. The railway laboratory subsequently confirmed that this was the submarines' problem.

While Alan was at the shipyard, he noticed that overhead cranes were being operated by the operator walking along the workshop floor. This suggested to Alan a way to overcome crane operation restrictions at DELEC and introduce the practice of multi-tasking. Time was lost when the crane drivers, who only worked the day shift, refused to occupy the overhead crane cabin when the air was full of diesel fumes. Alan's plan was copy the shipyard practice and modify the crane for operation from the floor of the workshop. He advised Noel Fields to arrange for a private firm to modify the crane but not outline the plan to the staff. When the crane cabin was removed the staff assumed it was to fit air conditioning. When the staff understood the true purpose of the modification, the crane drivers' union objected. The final agreement was for the change to be accepted pro-

vided the crane drivers remained employed and the maintenance staff using the crane were trained and qualified in its use. This resulted in the continual availability of the crane on the day shift when operated by crane drivers, and additional availability on the afternoon shift when operated by tradesmen.

After his success in having tradesmen, take over some of the work of crane drivers, Alan attempted to combine the trades of boilermaker, car and wagon builder with the semi-skilled work of car and wagon assemblers and the unskilled work of labourers. Boilermakers, and car and wagon builders were highly skilled having completed a five-year apprenticeship, whereas car and wagon assemblers used basic skills to assemble pre-manufactured parts and labourers provided assistance. The combined classification was to be called 'Car and Wagon Maintainer'.

New wagon repair facilities at Newcastle and Port Kembla were being built to replace open-air facilities used to undertake running repairs on wagons. The new facilities, based on a design Hollis Henderson obtained from the United States, introduced a 'production line' wagon repair system. Alan wanted to staff these facilities with the proposed Car and Wagon Maintainer classification. This new classification would perform all the work in the facility except welding, which would only be performed by boilermakers.

This proposal met with strong resistance from the unions. Alan failed to talk the unions into accepting the new classification, and they gave notice of impending strike action if the re-classification went ahead. The matter was sent to the Industrial Commission, which ordered further negotiations between Alan and the unions. Alan gave them an ultimatum that if his re-classification was not accepted he planned to: "lease the facilities to private enterprise and offer the staff redundancy". Alan was unable to install his new classification by the time the Minister opened the new facilities in January 1992.

The closure of many country depots also made it difficult to manage the failure of wagons running in trains. The traditional practice was to place a failed wagon in the nearest siding and then contact the DLE responsible for the area who would send out a team to repair the wagon so it could be put back into service. However, because so many regions had lost their responsible DLE, Alan developed a system of flying repair gangs. These gangs, comprising a lorry driver, a boilermaker, a car and wagon builder, and two wagon assem-



Bill Goodwin, General Manager Workshops, Bob O'Loughlin, Metropolitan Operations Manager, and Alan Parkinson at the opening of the Chullora Parts Distribution Centre.

ALAN PARKINSON COLLECTION



82 Class diesel-electric locomotives 8206 and 8258 bring their loaded coal train through East Maitland on 21 December 1996. It is evidently a hot day as a local resident cools-off in his yard on the left. S MILLER PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 150071

Motors, United States), Goninan Industries (General Electric, United States), Morrison Knudsen (United States) and a Chinese locomotive company. All the firms heavily promoted their particular tender, with some offering a 'Power by the hour' arrangement. In this arrangement, the manufacturer takes responsibility for major servicing of the locomotives.

General Motors diesels were selected to fill the contract. The Electro Motive Division (EMD) in Ontario, Canada built 35, 4000hp (2860kW) diesel electric locomotives. These locomotives, designated the 90 Class, still haul coal traffic in the Hunter Valley. Clyde Engineering built 58, 3250hp (2260kW) EMD locomotives at Braemar in the NSW Southern Highlands. Designated the 82 Class, they are used for general freight traffic in New South Wales and sometimes on the national standard gauge network.

MANAGEMENT

One of Alan's biggest management difficulties was obtaining satisfactory locomotive overhauls. Major overhauls and rebuilds were carried out by the railway workshops. However, on a number of occasions Alan found that faulty repairs carried out in the workshops caused some operational breakdowns. The workshops, though, were an independent branch of the State Rail Authority and, unlike the depots, not under Alan's control. Consequently, Alan could not directly intervene in the management of the workshops to remedy the faulty repair processes.

An example of faulty workshop

overhauls was the continual failure of traction motors. Between 1990 and 1991, Alan had over 350 failures of traction motor armatures and suspension bearings. To establish the cause of these failures the General Manager Workshops gave Alan permission to examine the traction motor repair practices in the workshops. Alan, together with his engineer Martin Farley, found problems with the storage of the bearings and the machining of the outer casing holding the bearings. Alan explains:

Martin found that the practice of storing the bearings was faulty. The storemen removed the new bearings from their packaging and separated the outer race, the inner race and the bearing cage. These items were then stored inde-

pendently of each other. Consequently, the sets, when issued, were not matched. This was one of the major contributions to bearing failures. This practice was immediately stopped.

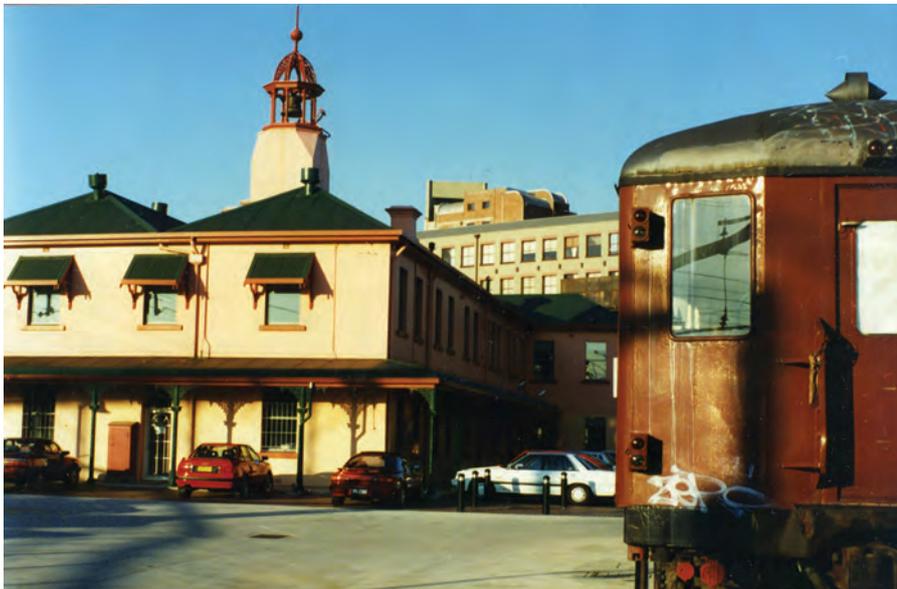
I also suggested to the Manager of the Bogie Shop that he ask the Laboratories to check the alignment of the machines used to rebore the traction motor casings holding the bearings. The Laboratory, using laser beam testing equipment found that the machines were out of alignment. The machines were adjusted to correct this problem.

To deal with the workshop difficulties, Alan increasingly sought private firms to undertake locomotive overhauls. Alan's first use of a private firm for locomotive overhaul came about by accident. An 81 Class locomotive entering DELEC suddenly exploded and was engulfed by fire. The staff battled the blaze until the Fire Brigade arrived and extinguished the fire. The wearing through of a copper fuel pipe, which had not been secured to the engine block, caused the fire. This allowed fuel to flood the floor and be ignited by one of the electric motors in the engine compartment.

The General Manager Workshops, Bill Goodwin, advised Alan that the workshops could not rebuild the damaged locomotive because his workload was too great. Alan approached Clyde Industries for a quote pointing out to the manager, Kevin Thompson, that the rest of the 81 Class would shortly be due for major overhauls. With the prospect of additional overhaul work Clyde Industries submitted a quote of



Co-Co diesel-electric locomotive 4720 undergoing repairs in the open at Broadmeadow Locomotive Depot on 31 October 1982. ARHSNSW RAILWAY RESOURCE CENTRE, 065541



The former CME and Works Manager's office at the Eveleigh Workshops after restoration. Alan Parkinson was taken here during his final day as Chief Locomotive and Rollingstock Manager. R F MCKILLOP PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 039464

\$450 000 to rebuild the locomotive, which Alan accepted.

Alan explains what subsequently followed:

After the 81 Class locomotives had been in service for eight years, I advised the Executive that consideration must be given to a general overhaul program to begin as soon as possible. My suggestion was that tenders should be sought from private firms as well as the Workshops. Although I said that the track record of the workshops was not very good, so to ask them to overhaul all 84 locomotives was a very big ask.

It was decided to start the ball rolling with a quote from the workshops and Clyde Engineering. The workshop quote was \$500,000 while the quote from Clyde Engineering was \$450,000. It was decided to accept the Clyde Engineering quote with an order for the overhaul of 12 locomotives and the promise of further work if these overhauls were satisfactory. The workshops were given one locomotive to overhaul to keep face.

In 1993, Alan was interviewed by officers from the NSW Independent Commission Against Corruption (ICAC) about his heavy overspending on employing outside contractors, Alan explains:

The meeting comprised three ICAC personnel, who took no time in telling me they knew all about my personal finance status and family details. This shocked me as I was told that there had been concerns about whether I may have received inducements to award contracts to private companies. Apparently, no evidence was found, but the officers warned me to be more careful about the way I spent my budget in future. I requested that this warning be given to me in writing, but the officers refused. I informed the Executive that any budget restrictions would undermine the good work we had been achieving.

TOWARDS RETIREMENT

In November 1993, Alan's wife died after a long illness. The following June, Alan's contract finished and he decided to retire. On his last day as Chief Locomotive and Rolling Stock Manager, his colleagues took him to the old Works Manager's office at the Eveleigh Locomotive Workshops and into the room where he signed in as an apprentice on 27 November 1948. They then took him to Bay 10, where he started work and on to the old Erecting Shop where he had worked on C38 Class steam locomotives. Later Alan was presented with a framed print of a

C38 Class locomotive.

Alan's railway career was acknowledged at a dinner attended by his family, colleagues, railway executives, and the Transport Minister, Bruce Baird. Alan began his speech by declaring that his achievements were only possible because he had the support of a great team. He then went on to talk about his life's passion, the NSW Railways. However, when he was still talking two hours later, one of his daughters called 'time' from the audience! Alan finished his speech by saying: "I had a truly wonderful and eventful Railway career and will be forever appreciative of the support from the staff I managed." As his friend and long-time foreman fitter at Valley Heights says: "Alan is a greater talker."

Alan Parkinson retired to his home in Springwood, undertook some consulting work for railway companies, and married again. A project which consumed much of his time was the building of 1/10 scale models of the first and last locomotives he worked on, a 55 Class steam locomotive, and 90 Class diesel locomotive. Alan and his wife moved to a retirement village in Springwood in 2013, 3km from the site of the Valley Heights Locomotive Depot where he began his management career in 1956 as relief District Locomotive Engineer. Currently, Alan is putting together a set of notes of all the rail accidents he attended during his career, but that is another story.

ACKNOWLEDGEMENTS

Special thanks to Alan Parkinson for sharing his working life.

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April ARH comment

A reader has commented that the map of the Koorawatha to Grenfell branch line on page 19 of the April magazine needs to be turned 90 degrees clockwise in order to get the proper

perspective to the north. The orientation used for this map was necessary to fit the map to the page format of *Australian Railway History*.

Editor



An undated aerial photo of the Mile End Locomotive Depot in Adelaide with the early straight running sheds on the right and the Webb era roundhouse dominating the centre. NATIONAL RAILWAY MUSEUM

LOCOMOTIVE DEPOTS OF SOUTH AUSTRALIA

Their features and evolution

Rodney Barrington

In the steam era, the locomotive depot offered a special atmosphere and excitement to railway enthusiasts. In this article, Rodney Barrington reviews how the locomotive depots of the South Australian Railways developed through various eras. **Editor**

This presentation is aimed at identifying the essential features of the typical steam railway locomotive depot on the South Australian Railways system. There were features common to all railways, but as each system developed, certain features—such as railway architecture, engineering and operating characteristics—appeared that were unique to a particular system. It is these features that enable the discerning eye to identify one railway from another.

LOCOMOTIVE DEPOT FEATURES

Firstly, an analysis of the essential features of a steam locomotive depot is undertaken. The major feature is usually a large shed containing tracks for locomotives. These buildings were used for stabling of locomotives currently out of service and their preparation for traffic tasks. These were designated as running sheds to distinguish this facility from sheds that were used for significant repairs to locomotives.

Most smaller and outlying depots were provided with running sheds only. These were usually provided with pits between the rails for access beneath the locomotives for routine maintenance and inspection work, such as lubrication of motion gear. On earlier locomotives with inside-cylinders and reversing gear, these pits provided the only means of access to this equipment. Pits were also provided externally to sheds for the additional purpose of dropping of fires and disposal of ash from locomotive fireboxes.

LOCOMOTIVE FUEL

Fuel facilities were provided to coal locomotives. Initially, simple wooden platforms were built adjacent to the running tracks to store coal at an accessible height for it to be hand-shovelled into locomotives. Later, simple lever devices were used to ladle the coal up into locomotive bunkers, while Cowans Sheldon coaling grab cranes were used at larger broad and narrow gauge depots. Where coal stages were used in more recent times, mechanical conveyors were installed to transport the coal into the locomotive tender or bunker, but the coal still had to be hand-shoveled to the base of the conveyor.

During the 1920s mechanical coaling plants were introduced, all of concrete construction. The largest of these



SAR Rx Class locomotive No. 217 being coaled by Cowans Sheldon coaling grab crane (B/No. 2905 of 1908) at Mile End Depot c1925. SAR PHOTO, R HORNE COLLECTION

with 500 tons capacity was built at Port Pirie. Concrete towers of 300 tons capacity were erected at Mile End, Taillem Bend, and Peterborough. Smaller concrete coaling plants of 150 tons capacity were provided at Port Adelaide, Wallaroo and Gladstone, but 150-ton towers proposed for Karoonda and Terowie were not built. Small 15-ton capacity coaling plants of timber construction were erected at various locations including Eudunda, Strathalbyn, Snowtown, Riverton, Port Pirie (temporary broad gauge use), Mount Gambier, Cummins, Minnipa, and Renmark (as late as 1958). From the late 1940s, 45-ton capacity coaling towers of steel construction were erected at Terowie, Cockburn, Naracoorte, Mount Gambier (new broad gauge depot), and Bordertown.

The supply of good quality coal for locomotive use was a continuous problem for the SAR. It was all imported mainly from the northern New South Wales coalfields, until the 1940s when there were various industrial issues and shipping problems that disrupted supply. Quality was frequently indifferent, too. At times, in desperation, coal was sought from South Africa and England. In order to ensure that a continuous supply was available for locomotives, coal was stockpiled around the system in large open heaps at various key locations.

Most large locomotive depots had coal floors consisting of flat sleeper beds, created adjacent to convenient sidings, and made accessible to small-rail mounted grab cranes. At the Port Lincoln depot this arrangement was

the main method of coaling locomotives, until the end of steam power. It was a ritual in the 1960s for the entire Port Lincoln-based locomotive fleet to be lined up and coaled in the one shift every Tuesday. At Port Pirie a vast floor was created adjacent to the specially designed 500-ton coal handling plant.

As with other state railway systems, oil-firing of locomotives was introduced in the 1940s to overcome fuel supply shortages. This required facilities for oil storage to be added to many of the larger depots. These took the form of overhead tanks that, for space reasons, usually straddled the tracks and avoided the need to alter existing track arrangements.



Tour train steam locomotive 520 is coaled at Taillem Bend, as in days of yore, by means of a rail-mounted grab crane, as at the time in the early 1970s the coaling plant was no longer in use. At the larger depots these grab cranes were generally used to muck out ash pits. NATIONAL RAILWAY MUSEUM COLL ALX14461

WATER SUPPLIES

Water was the other key commodity for steam locomotives and, given the dry terrain of many SAR locomotive depots, this could be a challenge.

As elsewhere, water was supplied to locomotive tenders or side tanks via columns located at strategic points alongside the tracks. The water was generally supplied by an eight-inch diameter water main for quick discharge into the locomotive.

There were two common types of water column on the SAR. The earlier style was of cast metal with a hose bag for directing the water to the tender. Water was admitted by turning a large wheel-operated valve at the base of the column. These sometimes necessitated a two-man operation; one person directing the hose bag and a second to operate the valve.

From the 1920s, automatic water columns, based on an American design, were introduced. One person could operate these distinctive columns, usually the fireman. From a position standing on the tender he could swivel the discharge trunk over the locomotive tender and control the flow of water from that position. There were also other types about, including small standpipes, in addition to minor design variations on the two major types.

Water was stored adjacent to locomotive depots in large capacity overhead tanks. Up until the introduction of reinforced concrete in the early 20th



A concrete water tower and a water-treatment plant, believed to be at Alawoona in the north-east Mallee country. It subsequently became the junction for the Barmera and Loxton lines. SAR ANNUAL REPORT, COURTESY INTELTRANS

century, the SAR used imported cast iron tanks. These were supported variously on cast iron cylindrical columns, fabricated rail sections, and, in a few instances, on top of masonry pump-house structures.

Thereafter, the most common form was a reinforced concrete cylindrical tank supported on a smaller diameter cylindrical base. Where smaller tanks were adequate, the familiar cylindrical corrugated galvanized metal tank was used supported on timber or a fabricated steel structure.

TURNTABLES

Another significant requirement for steam locomotive depots was a facility for turning locomotives. In early times hand operated turntables of 40ft, 45ft, 50ft and 60ft diameter were used around the system. Later, where space permitted, triangular arrangements of tracks were used to turn locomotives. In South Australia many of these turning triangles were often provided as an expedient, to replace smaller diameter turntables when larger—and longer—locomotives were introduced into service in the 1920s.

Larger 75ft and motorized 85ft diameter turntables were also introduced at this time. Many of the 50-foot diameter turntables were retained and upgraded over the years to 53ft by an expedient of using heavier rails cantilevering beyond the original deck. These turntables could

then be used by the recently introduced Model 75 railcars and also Rx Class locomotives with eight-wheel tenders.

PRE-WEBB ERA DEPOTS

Generally in South Australia, running sheds were constructed of timber with iron-clad walls and roof. There were of course some exceptions, Riverton being the most noteworthy where both running sheds and a workshop facility were provided of masonry construction. The latter building is still standing. The sheds provided in these early depots were of the rectangular variety to a common design with a number of variations.

The types of sheds included:

- Single-road sheds;
- Two-road sheds; and
- Four-road sheds under a common roof.

Larger rectangular sheds of six and seven running roads were provided at Islington and Mile End respectively.

Another variation on the narrow gauge system were combined locomotive and carriage sheds comprising a two-road running shed and single-road carriage shed. These were built at Kingston, Beachport, Naracoorte, Bordertown, Cockburn and Oodnatatta.

There were two distinctive types of roof construction; ordinary gables and a curved (or barrel) shape. The barrel roof appeared on sheds at Port Augusta and Port Pirie (both four-roads), Laura (single-road) and Gladstone (two-roads). The contract drawing for the two-road locomotive shed at Morgan offered the tenderer the option of providing either a gable roof or a barrel roof. It is suspected that the roof form was dictated by the builder's costs and preferred method of construction.

MODERN RUNNING SHEDS

A feature of the Rehabilitation Scheme introduced by the American Commissioner WA Webb in the 1920s was the introduction of the large roundhouse-type locomotive sheds.



The 500-ton coal plant at Port Pirie loco depot in June 1952. The area beneath the chute to the right was an open coal floor, but coal was in short supply at Port Pirie in the 1950s, so many steam locomotives at the depot were oil-burners—narrow gauge and broad gauge. Standard gauge locomotives were rare visitors to Port Pirie. DOUG COLQUHOUN PHOTO



The old straight running sheds at Port Adelaide locomotive depot in 1952 with F, P and R Class steam locomotives awaiting their next roster. This running shed comprised a paired gable structure with a lean-to annex on the left. The 150-ton coaling tower dominates the background. DOUG COLOQUHOUN PHOTO

The first roundhouse built in South Australia was erected in Port Augusta by the Commonwealth Railways. The pragmatic engineers in this new railway venture borrowed the design of their roundhouse from the Queensland Railways. Then early in the 1920s a design was prepared for a small three-road roundhouse type shed radiating off the 60ft diameter turntable at Wolseley, but it was never built.

The Webb era roundhouses were based upon the provision of a motorised 85-foot diameter turntable with a 100-foot deep shed. One of these was installed at Mile End—a near full circle of 42 roads—with smaller partial roundhouses provided at Taillem Bend, Peterborough and Port Lincoln. In the 1950s, an eight-road roundhouse was provided at Mount Gambier and a three-road roundhouse segment was constructed at Naracoorte as part of the gauge widening scheme. At Renmark a small two-road rectangular shed was provided in conjunction with a 75ft diameter hand-operated turntable.

A construction feature of these later buildings was the use of corrugated asbestos cement sheeting for roofing. This then innovative cladding material was not affected by the sulphurous exhaust gasses emitted by steam locomotives unlike the earlier corrugated iron roofing.

MAIN LINE FACILITIES

Locomotive servicing facilities were provided at strategic positions on running lines in station areas to enable watering, coaling and lubricating locomotives.

The most common facility on main lines was the provision of watering facilities, many of which had water columns and associated short inspection pits between the running rails. This enabled locomotive crews to rake-out fires, drop ash and make minor lubrication checks while taking water. In these instances, the water columns were often conveniently placed between a pair of running tracks enabling two locomotives to use the facility.

At Eurelia on the narrow gauge system between Quorn and Peterborough, arrangements were made in the 1940s for two T Class locomotives to be serviced simultaneously by the provision of two water columns so placed to water the paired locomotives in use at the time. At refreshment room stations like Bowmans and Riverton, the locomotives on passen-

ger trains were uncoupled from the train and drawn forward for watering and servicing.

Coaling facilities were also provided at some key locations on main lines to give certain classes of locomotives a greater operating range before returning to a depot and to eliminate the need for coaling at terminal stations. The 15-ton coaling plant at Eudunda, for example, enabled locomotives to be topped up in transit to run a return journey from Adelaide to Morgan. A coaling plant was also provided on the main line at Snowtown for topping-up Port Pirie-bound trains. One track of the coaling plant at Wallaroo also served the main line to Moonta. A 45-ton coaling tower straddled the main line at Bordertown, which avoided the necessity for locomotives running from Taillem Bend to Serviceton to take coal from the Victorian facility at Serviceton.

The SAR General Appendix also gave instructions regarding the location of emergency supplies of coal, sand and lubricants located at various out-stations

1950s STEAM LOCO ALLOCATIONS

On the broad gauge SAR system in this era there were two major 'home' depots serving the Adelaide and Murray Bridge divisions. The locomotive allocations are summarised here.

Adelaide Division

The **Mile End Depot** was home to all large power locomotives in the Division except those allocated to



710 Class 'Mikado' locomotive No. 718 stands on the Mile End 85ft turntable prior to working a Dry Creek evening shunting trip on 14 December 1965. AUTHOR'S PHOTO

Tailem Bend and suburban locomotive power shunting engines. Within the depot a P Class 2-4-0T locomotive was used for roundhouse stabling duties and was known as the resident 'roundhouse rat'! Mile End also provided all locomotives for hills traffic through to Tailem Bend.

The **Port Adelaide Depot** was home to shunting locomotives, generally P Class 2-4-0Ts for wharf traffic; an Rx Class 4-6-0 for transfer work; and it stabled suburban F Class 4-6-2 tank locomotives used for suburban passenger trains. It was also the last haunt of the K Class 0-6-4T locomotives.

Outstations: Generally one or two Rx Class locomotives for shunting power were provided at Gawler, Wallaroo, Terowie and Snowtown (the latter for Lochiel traffic).

Gladstone had an allocation of one 700 Class Mikado for Wallaroo freight traffic, in addition to at least one Rx 4-6-0 for shunting. **Port Pirie** had an allocation of one Rx (spare) and up to three 740 Class Mikados in the 1960s for shunting tasks.

Murray Bridge Division

The **Tailem Bend Depot** was the major facility in this division. Its locomotive allocation included:

Rx Class locomotives for shunting and Murraylands services; two locomotives, an Rx Class or an S Class 4-4-0 locomotive required for Murray Bridge local traffic; two 620 Class light 4-6-2 locomotives for Renmark and Pinnaroo services; three 700 Class type Mikados (generally 710 series); two or three 750 Class light 2-8-2s; seven 600 Class heavy 4-6-2s for Serviceton traffic (and later Mount Gambier); and one 520 Class 4-8-4 locomotive for Pinnaroo and Mount Gambier traffic. Roundhouse 'treasures' in the early 1950s included a P Class 2-4-0T for depot work and Q90, the last of this class of 4-4-0s in traffic.

Outstations were supplied with Rx Class 4-6-0 locomotives and one 750 Class light 2-8-2 was allocated to Mount Gambier. Its Rx Class was used for shunting and Millicent line traffic; while it also stabled both SAR and Victorian Railways locomotives as required. Renmark had Rx Class locomotives for shunting and Barmera traffic, while Serviceton's Rx Class 4-6-0s undertook shunting and spare engine activities. Naracoorte had Rx Class locomotives for shunting and Kingston line traffic.

During this period, broad gauge Rx and S Class locomotives were provided for south east gauge widening works. A small fleet of narrow gauge locomotives including T, Y



The old Mt Gambier locomotive depot with a SAR narrow gauge T Class locomotive on the left and a VR broad gauge K Class locomotive No. 150 on the right. NATIONAL RAILWAY MUSEUM PHOTO



SAR 520 Class 4-8-4 locomotive 531 being coaled at the 45-ton coaling plant at Naracoorte in the 1950s.

NATIONAL RAILWAY MUSEUM PHOTO

and Wx Class locomotives were accommodated at Mount Gambier and Naracoorte.

Peterborough Division (narrow gauge)

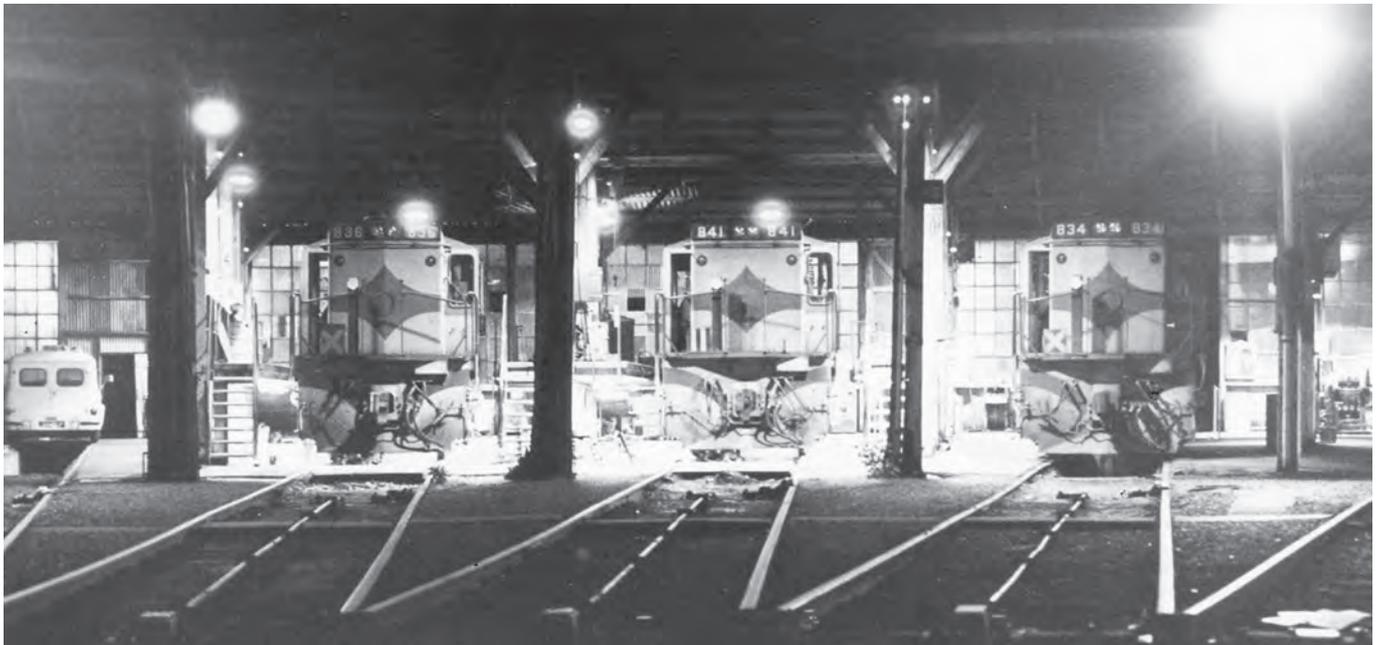
Peterborough Depot was home to: ten 400 Class 4-8-2+2-8-4 Beyer Garratt locomotives; T Class 4-8-0 locomotives; and a solitary Y Class 2-6-0 for depot work. This depot provided locomotives for all main line and branch line train services except for Wilmington. In the 1950s shunting work was assisted by a residue of Y and Yx Class 2-6-0 locomotives and two V Class 0-4-4 tank locomotives for depot work.

Port Pirie Depot had an allocation: of T Class locomotives for shunting work, all of them oil-burning, and four Model 75 railcars. **Gladstone Depot** was allocated coal-fired T Class locomotives for shunting and Wilmington line traffic; while **Cockburn Depot** had a single T Class 4-8-0 for shunting. **Terowie Depot** also had an allocation of T Class locomotives for shunting.

Port Lincoln Division (narrow gauge)

In the early 1960s the Port Lincoln Depot was the home for 16 T Class locomotives and four 75 Class railcars, but the introduction of 830 Class diesel-electric locomotives from March 1962 brought a rapid end to the steam era.

Outstations included Thevenard and Minnipa. In the 1950s shunting work was assisted by a residue of Yx Class 2-6-0 and three Z Class 4-4-0 locomotives. Railcars included two Fageol types.



Following dieselisation, three Goodwin Alco 830 Class locomotives occupy stalls at the Tailem Bend roundhouse, with 836 and 841 on roads upgraded with new pits, high-level walkways and bright lighting. A motor inspection vehicle (MIC) is stabled on the left in this night scene. NATIONAL RAILWAY MUSEUM, ALX10608

DIESEL LOCOMOTIVE FACILITIES

When diesel locomotives were introduced on the SAR, facilities for the new motive power were provided at the larger steam locomotive depots with the exception of Mile End where separate arrangements were made.

At Tailem Bend refueling facilities and distinctive four-legged sand towers were erected on one of the inbound tracks to the roundhouse. Within the roundhouse a number of bays were rebuilt with high-level platforms, expanded pits and provisioned with fluorescent lighting to undertake maintenance of the new motive power.

CONCLUSION

In recent times, while much of the steam locomotive infrastructure has disappeared over the years, remnants can be found in many places. The earlier cast iron tanks have outlasted many of the reinforced concrete structures, although many no longer hold water. Original tanks and water columns remain intact and in use on the Pichi Richi Railway at Quorn and the Steamranger Mount Barker to Victor Harbor line at Mt Barker and Strathalbyn. At Victor Harbor the original 85ft electric turntable still sees use, while yet another 85ft turntable has been inserted in the line just north of Mr Barker Station.

Fortunately at Peterborough the entire large locomotive depot remains

intact and operates as an interpretive museum known as Steamtown. The complex includes a major portion of the steam roundhouse served by an original 85ft turntable and the adjacent 1970-built diesel depot. Although initially built to serve narrow gauge, a unique feature of the complex is the mix of the three principle track gauges used in Australia that converge onto the turntable.

The three gauges met at Peterborough in 1970 when standardisation works between Port Pirie and Broken Hill were completed. While the broad gauge line from Adelaide was extended from Terowie, the railway to Quorn

remained narrow gauge. Missing is the 300 ton concrete coaling tower which has been demolished.

Although relocated and modernised, two 85ft turntables introduced by Commissioner Webb still swing today's locomotives at Keswick and Dry Creek depots.

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This temporary depot was set up in 1950 to service the new diesel-electric locomotives on a single track immediately adjacent to the Mile End Station. Note the pair of distinctive sanding towers straddling the 900 Class locomotives. WAL JACK COLLECTION, NRM, 01865



The old Mount Gambier Locomotive Depot from the western end, with the 75 foot turntable in the foreground and the 15-ton coaling stage on the left. NATIONAL RAILWAY MUSEUM PHOTO



The rear of the former narrow gauge locomotive sheds at Naracoorte in the 1950s with Fageol rail motor No. 108 and the J G Brill Company railcar No. 111 awaiting their next duty. No. 111, formerly broad gauge No. 10, was converted to narrow gauge in 1944 and re-converted to broad gauge and renumbered 4 in 1959. NATIONAL RAILWAY MUSEUM PHOTO

ROUGH RIDE ON 3378

Percy Suckling



The crew of C32 Class locomotive No. 3378 pose at Mount Victoria on 6 April 1936.
C A CARDEW PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 033828

Percy Suckling, now retired, was a locomotive driver based at Dubbo. He has provided this short account of his experience as a young fireman there in October 1965. **Editor**

THE OUTWARD TRIP

I had only been on the road for a few weeks and was still 17 years old, but was soon to learn that anything could come your way at unusual times on a steam locomotive. A memorable occasion was when I signed on at Dubbo loco with driver Ron Sherman at 3.30am on Saturday 16 October 1965. Our roster was to work No. 1 Goods train from Dubbo to Binnaway with locomotive 3230 and book off to stay at the barracks there.

Our trip to Binnaway was uneventful. There were the routine tasks of taking water at Elong Elong and Merrygoen. Most young men my age did not like going to barracks at all, let alone on a weekend, but I loved my job and as my usual task was cleaning engines, I longed for the day I would be out on the road. We booked off at the old brick Binnaway barracks for the return job to Dubbo on Sunday evening.

A MEMORABLE JOURNEY

Our roster was to work No. 2 Goods back to Dubbo with C32 Class locomotive No. 3378, but we were to have a rough trip home. Locomotive 3378 steamed as well as other members of the class at this time, but conditions were against us.

Although it was a wet night, we managed to keep the old girl going except for the section of the journey from Toogarlan to Merrygoen.

Following departure from Binnaway, trains stopped to exchange the electric staff three times; first at Piambra, then Neilrex and Toolgaran. Just prior to reaching Merrygoen, the line climbs at 1 in 75 and then has a series of 20 chain curves. On reaching these curves, we really had to struggle keeping No. 3378 going. It was a very dark night with drizzling rain and a strong wind blowing against us. To make matters worse, the sand pipe on the fireman's side was loose and working its way outwards from the rail head. While 3378 was steaming well with its safety valve blowing off, the engine suddenly went into a wheel slip.

As we were aware of the loose sand pipe, I grabbed the coal pick and left the cab to knock the pipe into its correct place. While making sure I had good footing while hitting the pipe, the driving wheels would suddenly spin so fast they gave off a shower of sparks. This made my task dangerous as I had to be careful not to be hit by the side rod, so I climbed back into the cab and we struggled on a little further. While I was on the ground, my mate had been keeping the boiler fed with coal and water, remaining ready to arrest any wheel slip.

It was not long before we went into another wheel slip so, after arresting this, my mate grabbed the trusty coal pick and headed for the wayward sand pipe. I was left alone on the footplate swinging the shovel and at the ready in case the engine slipped again. We battled on a little further but



Binnaway locomotive depot on 12 March 1967 with steam grab No. 1057 coaling the 30T Class locomotive 3144. The crew barracks are in the right background. ALEX GRUNBACH PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 200961

a combination of wet rails, the track curves, loose sand pipe and the wind blowing against us brought the train to a stand.

We whistled for the guard and soon Harry Newton (our Dubbo guard) appeared. It was decided that there was no alternative but to split the train, taking the two halves onto Merrygoen one after the other. On arrival at Merrygoen with the first half, we found two trains there waiting to cross us on their way to Binnaway. This meant we had to go back to collect the other half of our train before they could proceed. The control officer was most unhappy on hearing of this situation.

On arriving back at Merrygoen, we took water and put our train back together before setting off for Caratel Loop. There was a long winding 1 in 100 grade in this section and the problem was that we had to change the staff at Caratel for the next section to Elong Elong. With the former problems fresh in our minds, we knew we could not stop at Caratel Loop as this would cause difficulty in lifting the train. Accordingly, as we approached the Caratel staff hut, my mate grabbed the staff and sprinted quickly ahead of the train, leaving me to arrest any wheel slip while also keeping an eye out for my mate.

The timing was just right and No. 3378

reached the hut just as Ron emerged with a fresh staff for Elong Elong. With a smile on his face, he joined me in the cab. After reaching the top of the climb, we drifted down for eight miles enjoying a well-earned rest. We took water at Elong and continued to Dubbo without any further problems.

We cut our engine off from the train in Dubbo yard and took 3378 to 'loco' where we shared our story with the chageman and other loco crews. I

signed off duty from a trip behind me that I will never forget.

AFTERMATH

Six weeks later, on 27 November 1965, locomotive 3378 was involved in an accident with a truck at a level crossing in Coonabarabran. The locomotive left the track and rolled down the embankment.

In December 1965, I was examined



Locomotive No. 3378 was in very different terrain as it climbed a steep grade on the Illawarra Line as it departed from from Coal Cliff back in 1936. C A CARDEW PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 033828



Breakdown gangs use branch line diesel-electric locomotive 4917 to haul locomotive 3378 up the embankment at Coonabarabran for re-railing on 17 November 1965. Locomotive 4917 still operates with the Southern Shorthaul Railroad.
 G BANFIELD PHOTO, ARHSNSW RAILWAY RESOURCE CENTRE, 503471

by Senior Locomotive Inspector Bill Wadey for my fireman's appointment. Also being examined for his driver's appointment was one of the Binnaway enginemmen who was on

locomotive 3378 at the time of this accident. No. 3378 was withdrawn two years later and it was scrapped in 1968.

SHALE & SHAYS
The Fight for Shale Oil from the Wolgan Valley
 MARK LANGDON

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Riding Port Pirie's Trains

ARH 952, February 2017

Rodney Barrington's article on his train journeys to Port Pirie revived happy memories for me of similar trips made in the 1960s. In April 1963, rather than make the return journey from Adelaide in one day, I spread it over three days, travelling to Port Pirie via Terowie and Peterborough.

On Tuesday 20th I set out from Adelaide on the 6.10pm departure for Terowie. My luck was in as it was hauled by light Pacific locomotive No. 627, rather than a diesel, and the crew allowed me to travel in the cab. I only recall that we passed a derailed goods train at Gawler, the top speed was 58mph and the ride was very rough. That night I slept in the ladies' waiting room at Terowie.

A 930 Class diesel locomotive was on shed, but shunting at Terowie was being carried out by Rx and T Class locomotives. Rx No. 146 on a mixed gauge train in the coaling plant was a surprise as I did not know such an operation was allowed. The main attraction, however, was three Silverton Tramway 'Y class' locomotives, stabled there on their journey south to Brown's scrap yard in Port Adelaide. 11.40am saw me departing on the Brill railcar to Peterborough, treated en route to a spectacular lighting display.

The remainder of the day was spent inspecting Peterborough's locomotive

depot, with its complement of 400 Class Garratts, T class and the solitary Y 97 locomotive, and watching shunting operations in the yard, where I also spent some time riding on T 242. At that time it was permissible to travel on SAR goods trains after signing a 'risk note', so I duly caught such a train to Port Pirie, departing at about 7pm behind oil-burning 4-8-0 locomotive No. T 228. Once again I rode in the cab, but with no need to open the firebox door, it was bitterly cold. At 8.45pm while entering Jamestown yard, some of our wagons derailed. The crew reminded me that 'I was not in the cab' and we finally left at 11.15pm with a somewhat shorter train. At Gladstone, reached at 1.30am, I retired to sleep in the guard's van as we crossed a train headed by an 830 Class diesel locomotive. Arrival in Port Pirie was at 4.15am, but I slept on, de-training later between lines of wagons in the yard.

At that time Port Pirie was shunted by T Class 4-8-0s on the narrow gauge and Mikados 747 and 748 on the broad, although there was an Rx Class 4-6-0 in the loco shed at Port Pirie Junction. I rode 4-8-4 No. 522 from there as it pushed its train to Ellen Street Station for the 9am departure to Adelaide. With little activity on the Commonwealth Railways, I enjoyed watching T Class locos shunting in Ellen Street and on the wharves, as well

as spending a considerable time in the cab of Broken Hill Associated Smelters' 0-6-0T *PORT PIRIE* (Andrew Barclay 1955/1928) on shunting duty. Sister locomotives *POZIERES* and *PERONNE* were in the loco shed, but I do not recall on that visit seeing the diesel loco that Rodney referred to. This was a 0-6-0DH (Clyde 61-241/1961), which was sold in 1973 to Millars (Aust) Pty. Ltd. at Yarloop in Western Australia.

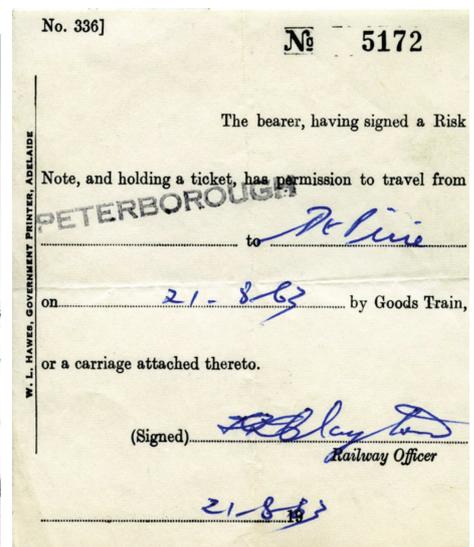
I completed the journey by taking the evening train to Adelaide which departed at 5.40pm hauled by 4-8-4 locomotive No. 521. The crew agreed to me riding with them as long as I got in the cab at Port Pirie Junction, to avoid the eyes of officialdom. The 520 Class locomotives were ideal for passengers, as there were drop-down seats behind and above the crew, giving an unobstructed view ahead. Our top speed was 63mph and a highlight of the trip was the failure of the automatic staff exchanger and the lineside search in the dark for the staff. I was impressed that where the line ran parallel to the Princes Highway south of Snowtown, the driver dipped the locomotive's headlight if there was oncoming road traffic.

Arrival in Adelaide was at 9.55pm and I wondered at the strange looks I got on the bus home, until a look in a mirror showed that my face was black with soot!

Richard Horne, South Croydon, UK



SAR 4-8-4 streamlined locomotive 524 heads the Up Port Pirie-Adelaide passenger train beside the Ellen Street Station on 1 December 1964. RICHARD HORNE PHOTO



My ticket to ride on the goods train from Peterborough to Port Pirie dated 21 August 1963. RICHARD HORNE COLLECTION

I read with great interest the Editor's article on the life and work of Richard G Watkins in Australian Railway History No. 951. In relation to the locomotives mentioned in the article there is perhaps some need for clarification.

Beyer Peacock 1877

The Beyer Peacock records show that this was ordered by AR Amos, otherwise known as Alexander Amos, the railway construction contractor.¹ In January 1878 a locomotive was recorded as having arrived at Dubbo for the Dubbo–Nyngan railway construction project being undertaken by Amos.² Forsyth's Steam Locomotive Data states in relation to this locomotive: 'Received in exchange for S-31 ex R. G. Watkins (Mittagong Coal Co)', with a date of 1890. The Mittagong Coal Company owned Box Vale colliery but this cryptic entry does not tell us whether Watkins was acting as an agent for Box Vale colliery or owned the locomotive in his own right.³

Beyer Peacock 2297

A locomotive named *SEGENHOE* was being used by contractors A Johnson & Co on the Bungendore–Michelago railway construction project in May 1886.⁴ It has been identified as Beyer Peacock 2296⁵ and was out of use by December 1887.⁶ Two Beyer Peacock locomotives were listed for sale by Cobb & Co at Deepwater, between

Glen Innes and Tenterfield, in April 1887,⁷ so Johnson's *SEGENHOE* could not have been one of these.

Manning Wardle 89

The note in Steam Locomotive Data mentioned above suggests that this locomotive was obtained for Box Vale colliery, and indeed a locomotive there was advertised for sale in September 1893.⁸ J L N Southern suggested that this was the Manning Wardle that was with the Smelting Company of Australia Ltd at Dapto in 1898.⁹

NSWGR 71 (Vale & Lacy)

NSWGR 71 is recorded by Ken McCarthy in his *Illawarra Gazetteer* as Vale & Lacy builder's number 12.¹⁰ I believe that Vale & Lacy's 11th locomotive was an E (17) Class 0-6-0 tender locomotive built in 1873.

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Although used by McGuigan, it is interesting to note that Beyer Peacock records show that this locomotive was not ordered by a contractor, but by the NSWGR.¹¹

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1. Hills, Richard L, 1997. Beyer Peacock Locomotive Order List. British Overseas Historical Trust, p15.
2. *Freeman's Journal*, 14 January 1882, p15: <http://nla.gov.au/nla.news-article111317285>
3. Forsyth, J.H. 1974. 'Steam Locomotive Data'. Public Transport Commission of NSW p14.
4. *Queanbeyan Age*, 29 May 1886, p2: <http://nla.gov.au/nla.news-article30791434>
5. Anon, 1950. 'Early Locomotives of the New South Wales Railways - A-93 (Now 19) Class, 0-6-0 Engines'. ARHS Bulletin 154.
6. *Queanbeyan Age*, 31 December 1887, p2: <http://nla.gov.au/nla.news-article30918322>
7. *Aust. Town and Country Journal*, 23 April 1887, p4: <http://nla.gov.au/nla.news-article71680044>
8. *The Sydney Morning Herald*, 16 September 1893, p3: <http://nla.gov.au/nla.news-article13912682>
9. McCarthy, K, 1983. *Gazetteer of Industrial Steam Locomotives Illawarra District NSW*. ARHS (NSW Division)
10. *Ibid.*
11. Hills, *op cit*, p14.
12. Harman, Fred W, no date. *The locomotives built by Manning Wardle & Company* Vol.2 Standard Gauge. Century Locoprints, p38.

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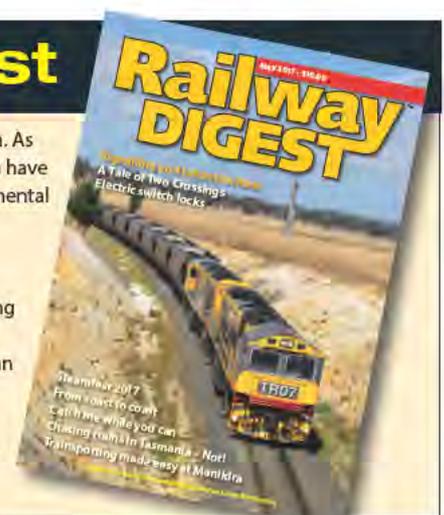
From Coast to Coast

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SAR 520 Class 4-8-4 streamlined locomotive 523, *Essington Lewis*, blows down adjacent to the 45-ton coaling plant at Mount Gambier locomotive depot in April 1966 as it is prepared to work an ANZAC Day ARHS tour train back to Adelaide. RODNEY BARRINGTON PHOTO

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