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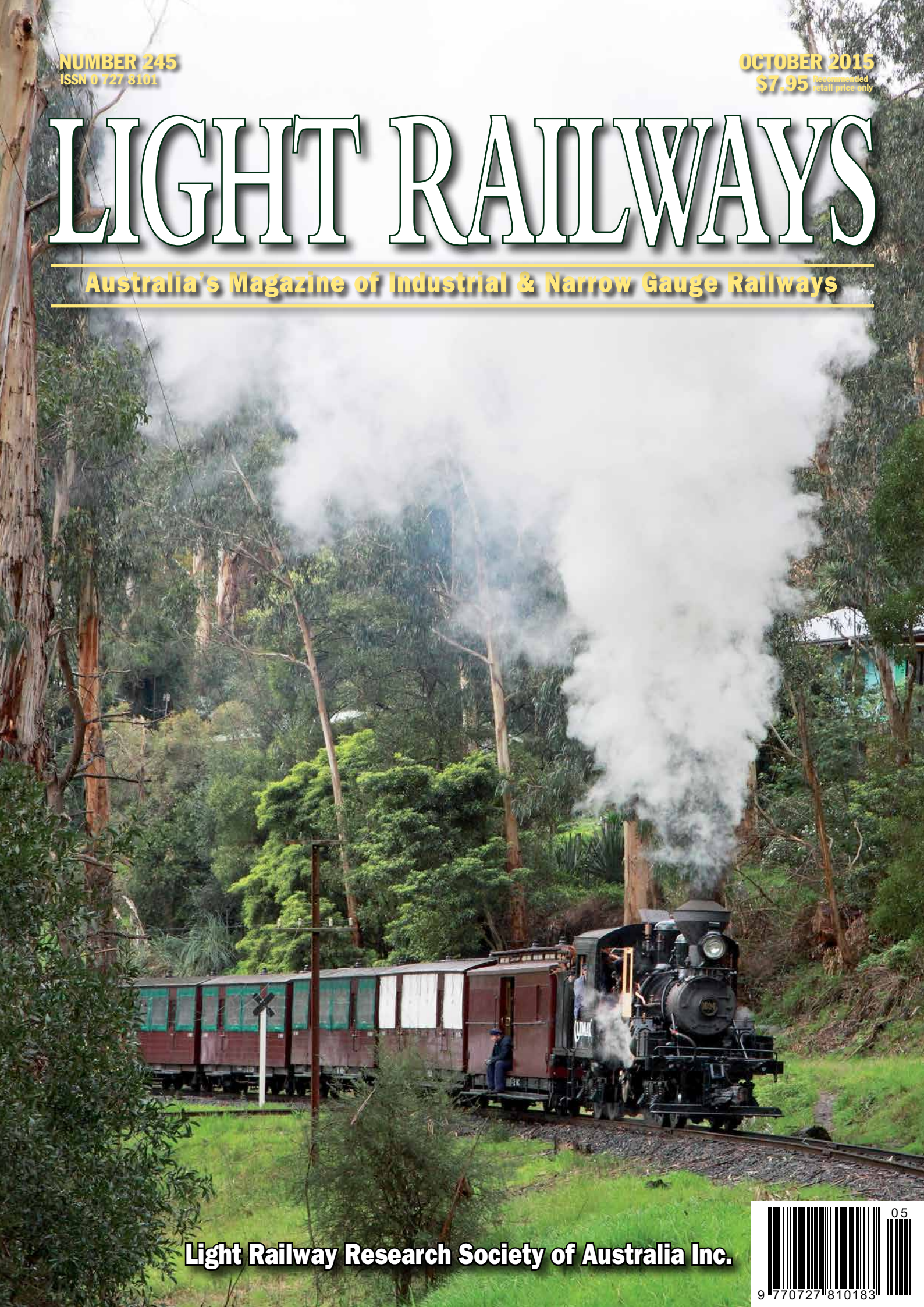
LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



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Imperial to metric conversions:

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

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Contents

Editorial

An anniversary – and the end of an era.

August this year gave us two significant LRRSA events, one relating to the *Light Railways* editorial team, and the other the LRRSA Council.

John Browning has retired from his position of Associate Editor, which brings to a close 32 years of involvement with LRRSA magazines.

John began his involvement with the editorship of *Light Railway News*, in 1977, when I was only six years old!

Along with Bruce Belbin and Bob McKillop, John has helped shape *Light Railways* into the successful magazine it is today.

Since I joined the editorial team in 2009, John has been a fantastic help and an excellent mentor - thank you John for your continued persistence, encouragement, support and friendship.

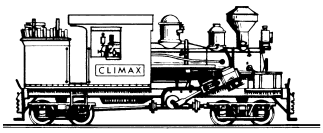
The second significant event occurred when Bill Hanks was elected unopposed as president of the LRRSA for the 26th time. Given the Society is 54 years old, this can only be considered an astounding commitment.

I remember Bill telling me he was tapped on the shoulder to take on the role while standing on the edge of a rather tall sawdust heap – who knows what would have happened if he said no!

Congratulations and thank you Bill.

Scott Gould

Front Cover: *Both the Puffing Billy Railway in Victoria's Dandenong Ranges, and the Forest Commission of Victoria's Climax 1694, are both still with us today thanks to a dedicated group of enthusiasts, who had the foresight to lobby for their preservation when there was very few examples of preserved railways in the world. One man who played a pivotal role in saving both was the late Norm Wadeson, who sadly passed away recently. Photographed 8 October 2013 on a test run after its second restoration at Selby by Matt Cantle, 1694 shows its narrow profile, and a billowing exhaust plume.*



Light Railway Research Society of Australia Inc. A14384U
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www.lrrsa.org.au

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

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

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

A panoramic view across the Clarence River entrance to the Iluka Training Wall with the landward end of the South Breakwater and Turner's Beach in the foreground. The first 1000 feet of breakwater was built in the early 1860s. It was 100 years before construction was restarted to finish it. *Photo: Ian McNeil*

The Clarence River Breakwater Story

Part 1 – The South Head Quarry Railway

by Ian McNeil

Preamble

Most visitors to the coastal resort towns of Yamba and Iluka on the NSW North Coast cannot help but notice the dominating presence of the two huge breakwaters that extend into the sea at the mouth of the Clarence River. The more perceptive may also spot the half-submerged and apparently ruinous rock walls extending a long way upstream in the middle of the river, and speculate as to their purpose. Few realise that both the breakwaters and the mid-stream walls are essential parts of an integrated system that still regulates tidal flows and river currents at the river mouth.

The history of the Clarence River breakwater system is wide-ranging and spans a period of over 110 years. It is a multi-threaded story of hard work and enterprise, of financial constraint and political indecision, and of engineering expertise and armchair criticism. It is a long story, and to do it justice it is being told in five parts in chronological order, each part centring around one of the quarry railways which supplied stone for the various breakwaters and training walls.

Part 1 covers the early breakwater works at Yamba which were the southern part of Edward Moriarty's 1860s scheme to improve the Clarence River entrance, and the role of the 1½ mile South Head Quarry Railway in its construction.

The Clarence River

In the early days of European settlement on the NSW North Coast, roads were non-existent and all communication and transport was by sea. There were no natural harbours, and settlements developed where navigable rivers and waterways gave access to the sea. The off-shore bars and shoals that obstructed their entrances were responsible for multiple shipwrecks amongst the fleet of sailing vessels and early steamships that plied the coast.

Pressure mounted on the NSW Colonial Government to improve conditions, and in response the Harbours and Rivers Branch of the Public Works Department[1] began a program of breakwater and training wall construction up and down the coast. The Government used a sizable portion of its loan funds from 1860 until the early 1900s in often futile attempts to render river entrances safer to navigate.

The Clarence River is the largest coastal river system in NSW. It rises near Tenterfield on the eastern slopes of the Great Dividing Range and flows for nearly 250 miles to the sea. It drains an extensive area of north-eastern NSW extending from the Queensland border down to Coffs Harbour. Many tributary rivers and creeks add to its flow.

Towards the coast the river passes through an extensive flood plain containing two large anabranch lake complexes and several large islands bounded by secondary channels. It flows into the sea at Clarence Heads between the towns of Yamba and Iluka.

European settlement in the Clarence River valley began in the 1830s. The highly fertile soils of the alluvial flood plain along the lower reaches of the river were once thickly covered in sub- tropical rainforest and immense red cedar brushes. The first to arrive were the cedar cutters who were attracted by the wealth of this red gold. After the Robertson Land Act of 1861, large numbers of free selectors settled in the Clarence valley, clearing the land and raising crops of maize and sugar cane.

Grafton was established 40 miles upriver at the head of deep-water navigation, and grew to become the most important town on the river. Coastal steamers came up the river to Grafton while shallow-draught vessels could push on a further 25 miles to Copmanhurst. For nearly 100 years the river was a major highway for the export of timber and agricultural produce to city markets. From the mid-1860s onwards there was a twice-weekly passenger steamer service to Sydney, while river boats serviced the smaller settlements up and down the river.

The mouth of the Clarence River was difficult to navigate and required a high degree of skill by river pilots and ship captains. Like most rivers on the NSW coast the entrance was obstructed by an off-shore bar of shifting sand. The channel across the bar constantly varied in direction and depth. There was also a pair of shallow reefs just inside the entrance with only a narrow passage between them. To negotiate the reef and the bar often required vessels to sail close inshore with the attendant risk of being driven onto Iluka beach in heavy seas.

Before the construction of the ocean breakwaters and river training walls seen today, the configuration of the entrance to the Clarence varied considerably. Its southern limit was fixed by the rocky headland of South Head at Yamba, but its northern extent was poorly defined by the unstable Iluka Peninsula. In years of low to average rainfall, the interaction of river flow and the north to south longshore current built up sand and sediment to form the North Sand Spit. This extended the Iluka peninsula southwards, at times reducing the entrance to less than 800ft wide.

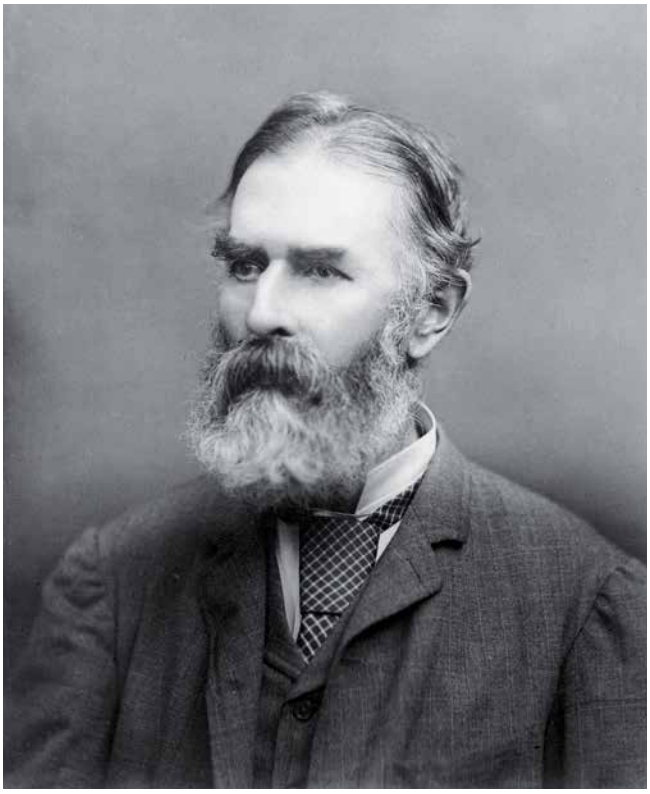
The catchment area was, and still is, subject to extremely intense rainfall events which can cause river flows to temporarily reach levels equivalent to some of the largest rivers in the world. During major floods the North Sand Spit would wash out, opening up the river entrance to form a 1½ mile wide maze of sandbanks and shallow shifting channels. This was the situation in 1845 when James Burnett carried out the first detailed survey of the Clarence. He reported that it was navigable only by the smallest class of sailing vessels and then only with great difficulty.

Edward Moriarty's scheme for the Clarence River

Edward Orpen Moriarty was a civil engineer who spent most of his working life in the employ of the NSW Government. He was born in Ireland, educated at Trinity College, Dublin, and emigrated to NSW where he set up as a consulting engineer and surveyor. He studied flood control and breakwater works in England and North America, and recommended similar schemes to improve NSW river entrances and harbours. He held various posts in government service, steadily rising in rank to become the influential Engineer-in-Chief of the NSW Harbours and Rivers Branch in 1858. He held this position until he retired to England in December 1888. [2]

When Moriarty turned his attention to the Clarence River in 1860, the river flowed into the sea through a relatively deep channel 800 feet wide beside South Head. The northern part of the entrance was blocked by the North Sand Spit, which by then was well established and partly covered in low scrub. Moriarty considered this to be the natural state of the river entrance and his scheme centred on maintaining the status-quo with a permanent shipping channel paralleling the south bank.

On 26 September 1860 Moriarty presented a detailed proposal to the NSW Undersecretary for Works entitled *Proposed Improvements at the Clarence River.*[3] He proposed to construct two ocean breakwaters about 1400ft apart, one on each side of the entrance. They would, he said, fix the position of a permanent channel across the entrance bar which would be kept open by tidal scour and river flow. They would also give protection from the large ocean waves which rolled unimpeded across the reef into the river mouth as well as reducing the amount of sand swept in during flood tides. His early survey plans show these breakwaters would have projected into the sea in a north-easterly direction, quite different from the modern-day breakwaters which run straight out to sea.



Edward Orpen Moriarty (1825–1896), Engineer-in Chief of the Harbours and Rivers Branch of the NSW Public Works Department. Photo: NSW State Library

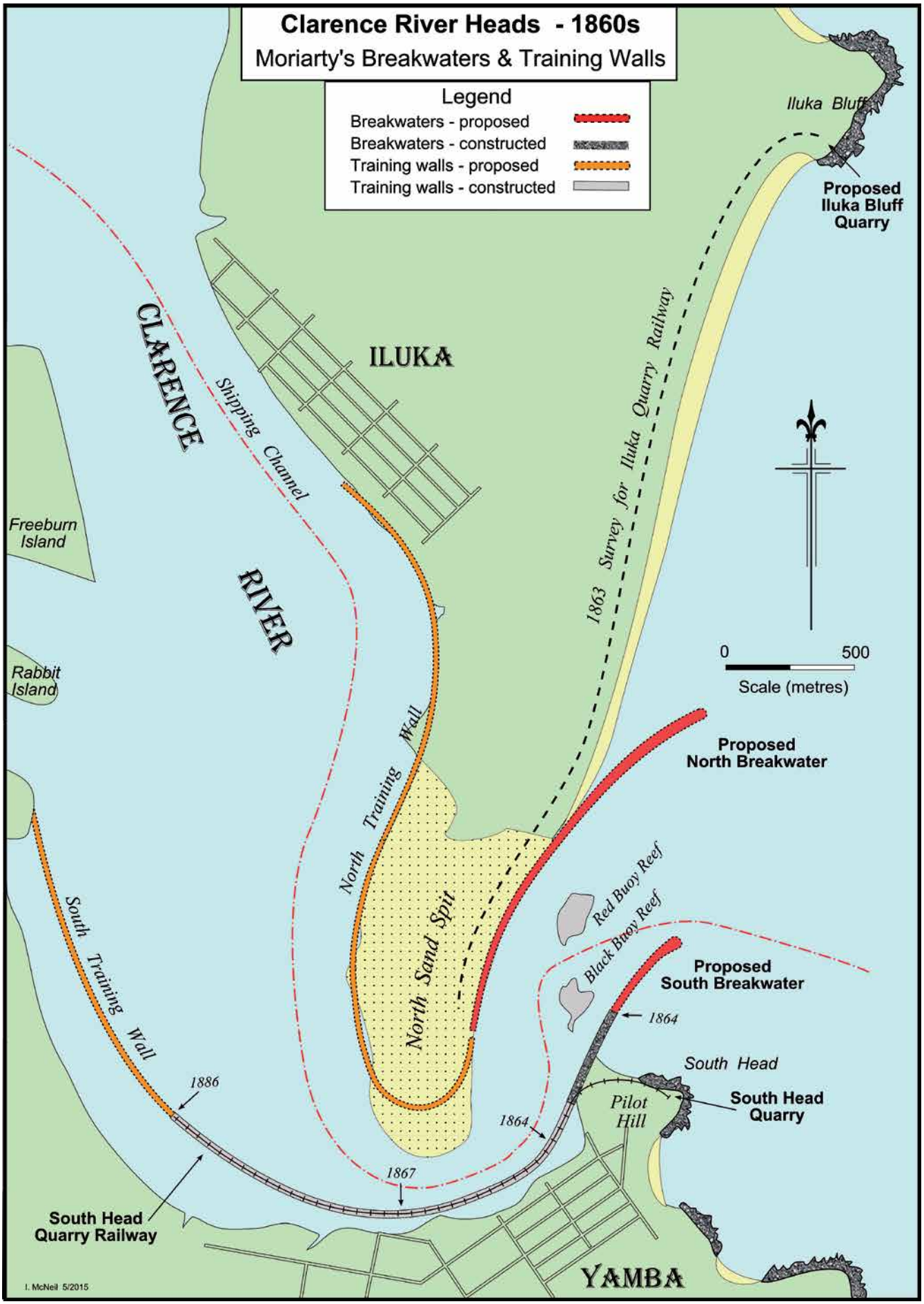
Inside the entrance he specified training walls to confine the shipping channel as well as to protect the river banks from flood damage and erosion. On the south side a two mile long training wall along the Yamba shore would extend in a sweeping curve from the base of Pilot Hill nearly all the way up to Rabbit Island. On the north side another long wall would train the current down the inner side of the North Sand Spit.

Moriarty said his proposed works would also have the benefit of creating a harbour of refuge. He pointed out that for ships in distress there were no safe havens between Port Stephens in NSW and Moreton Bay in Queensland. He estimated the works would cost £117,237, an enormous sum at the time and probably worth several hundred million dollars in today's currency. He added that if prison labour could be employed, as was then being done on the Portland breakwater in England, the cost could be much reduced.

In February 1861 the NSW Legislative Assembly voted an initial sum of £20,000 to be raised from loan funds to begin work on Moriarty's recommended works. This vote was for the erection of two stone dykes running out to sea for the purpose of fixing the channel.[4] Eight months later the Department of Public Works advertised for tenders for the construction of the first 1000ft of the South Breakwater at Clarence Heads.[5]

The first breakwater contractor – John White and Company

The successful tenderer for the South Breakwater was John White and Company, a partnership between John White and James Spiden. White had previously completed four government roadwork contracts on the Great Southern Road north of Goulburn, and had just begun a contract for the construction of a river training wall at the entrance to the Moruya River on the NSW South Coast.[6]



The unstable North Sand Spit dominated the entrance of the Clarence River before the construction of river training walls and ocean breakwaters. Navigation was difficult and dangerous as the entrance channel shifted erratically through shallow sand banks.

John White was awarded the Clarence breakwater contract in January 1862 on a cost per ton basis. His rate was 3s 6d per ton of stone for the breakwater approaches and 3s 4½d per ton for stones over three tons in weight for the breakwater. For stones under three tons the rate dropped to 2s 6d.[7] In total his contract was worth £8930.

The conditions of the contract specified posting a bond of £1,000, repayable upon completion of the works, and the nomination of two responsible persons as sureties answerable for the due performance of the contract.[8] White's guarantors were Thomas Henry Wiseman, a Sydney marine engineer, and William Howard Rolfe, a wealthy Sydney timber merchant. 9

White arrived at Clarence Heads accompanied by '*an efficient body of men and a great deal of material to be used*' in April 1862.[10] The remainder of his plant arrived from Melbourne shortly after on board the brig *Esperanza*. The exact size of White's workforce is not known, but he intimated to a reporter before his arrival that up to 100 workmen and their families would take up residence at the Heads.

At that time the European population consisted only of the Captain Francis Freeburn and his staff at the Pilot Hill Signal Station. The arrival of White and his workforce marked the beginning of Yamba, which was formally proclaimed as a township two years later in 1864. For the next 30 years the small population was made up mostly of Government employees and breakwater labourers. When the works were in full swing up to 150 people lived at Yamba. When the works were stopped or suspended, as they often were, it dropped to fewer than 50.

One of the first buildings erected in the embryo township was the Woolli Hotel near the foot of Pilot Hill. The enterprising hotelier, Walter Black, was granted a publican's licence in August 1862 and no doubt had plenty of thirsty customers amongst White's workforce as many of the men lived in tents pitched nearby.

Grafton Police Court reports indicate that John White was a rather ruthless employer. He hired labourers in Sydney and advanced them passage money for the sea voyage to Clarence Heads, which they had to repay by way of labour. If they worked for six months they would have their fares refunded. He paid them between 7s. 6d. and 9s a day less deductions for food and supplies which had to be purchased from his company store. His men were paid by cheque once every six weeks, that is, if there was anything left over after deductions. Each man had a pass-book in which the items they drew from the store were entered. Many were illiterate and had no idea of what was written in their books or how much they owed.

Some men found themselves getting deeper into debt each month. Those who were caught trying to abscond were arrested and charged under the Master and Servants Act. The inevitable guilty verdict at Grafton Police Court was followed by a sentence of two months hard labour. Upon release they were sent back to Clarence Heads to finish working off their debt.[11,12]

A similar employment situation was probably in force at White's Moruya worksite, where resentment within the workforce resulted in three determined attempts to blow up the powder magazine containing over four tons of gunpowder. The first two attempts failed when lit fuses went out inches away from opened gunpowder casks. The third attempt was foiled when the night watchman fired a shot at an intruder trying to force the magazine door using tools stolen from the blacksmith's shop. In another incident a tram of wagons was let go to run down an incline into the sea.[13]

At Yamba, John White built himself a comfortable 6-room residence near Pilot Hill, complete with stables, hayshed, tool-room, blacksmith's shop and a powder magazine close by. No doubt with the attempted sabotage events at Moruya still fresh in his mind, these works facilities were located where he could keep a close eye on them.

Less than 18 months into his contract John White was in financial trouble. In August 1863 his overseer at Clarence Heads sued him in Grafton Police Court for £77 in unpaid wages. A local carter also sued him for unpaid freight of goods to the breakwater works.[14] The butcher contracted to supply meat for his workforce refused to continue until he was paid.

But his real troubles stemmed from his Moruya breakwater contract. Back in August 1861 White had tendered to construct this breakwater at the rate of 2s. 2½d. per ton of stone, the contract being worth some £8260. White supplied all the plant but sub-let the work to his superintendent, Macnamara, who was to get 1s. 6d. per ton out of which he paid the men's wages. The Government built a weighbridge on the wooden-railed tramway between the quarry and the breakwater and appointed a clerk of works, Thomas Price, to record the weights of all wagon loads of stone passing over it. Unfortunately for White there was collusion between Macnamara and Price, resulting in the Government being over-charged for 38,000 tons of non-existent stone.[15]

Engineer-in-Chief Edward Moriarty became suspicious and in May 1863 ordered all work stopped on the Moruya contract. He refused to approve outstanding payments to White and dispatched three of his engineers to Moruya to investigate. They reported that Price was often drunk and absent from his post, and had falsely and collusively signed certificates for stone that was neither quarried nor delivered. They re-surveyed the quarry and concluded that it could not possibly have supplied the large quantities of stone charged for. Moriarty cancelled the contract and informed White he would not receive the 10% of the contracted amount, £826, that the Government was withholding until the contract had been satisfactorily completed.

Rumours began to circulate that White had failed his Clarence breakwater contract. In August 1863 his creditors obtained a court ruling in Sydney requiring him to show cause why his estate should not be sequestrated to pay his debts.[16] The rumours were correct. Within days John White and James Spiden had been forced to sign over their company and all its assets to three trustees - Joseph Burdekin Holdsworth, John Taylor and Archibald Ashdown - appointed by the creditors.[17]

White's trustees took over the works at Clarence Heads and completed the breakwater contract in order to redeem the £1000 performance bond. After this was completed in June 1864, they advertised a sale by auction of White's entire construction plant, also his house and furniture at Clarence Heads.[18]

The trustees also sued the Crown for breach of contract over White's Moruya breakwater, claiming damages and the recovery of withheld payments. The Full Court heard the well-publicised case and an 8-day marathon hearing ensued. Expert witnesses, including Moriarty himself, were called by both sides and a model of Moruya Breakwater Quarry figured prominently in the list of exhibits. The trustees won £361 in back payments, but lost their claim for £5000 damages.[19]

The South Head Quarry at Yamba

William Henry Baron, an engineer on Moriarty's staff, was appointed as the resident engineer at Clarence Heads in 1862 with an annual salary of £550.[20] He surveyed a quarry site on the north east side of South Head, right on the water's edge, about 300 yards east of the start of the breakwater.

The South Head Quarry was ideally located as a convenient source of stone for breakwater construction but it was not an

ideal source of stone. The thick upper beds were composed of softer rock types which fragmented when quarried and most was unsuitable for breakwater use. 40,000 tons of this material were removed during the initial stripping operations with 25,000 tons of it having to be run to spoil. The underlying rock strata were composed of a hard blue sandstone, which was suitable for breakwater construction. In fact it was so hard that it was some time before White's blacksmith could get the tools properly tempered to work it.

Quarrying operations started on the eastern-most point of South Head and worked back westwards. The quarry was opened up to provide a working face 250ft long by up to 20ft high. Quarry men hand-drilled holes down through rock at the top of the working face, filled them with gunpowder and blasted out large blocks weighing up to 30 tons. Anything too heavy for the lifting gear was broken down into smaller sizes. Two 12-ton capacity cranes and three 15-ton capacity shear-leg derricks were employed in the quarry.[21] Quarried stone blocks were lifted onto 4-wheel railway flat-top tip trucks for the short journey to the breakwater tip site. About 160 tons of quarried stone were produced daily.

Messrs P N Russell and Co, Sydney, supplied a weighbridge which was installed near the entrance to the quarry for an all-up cost of £315. Stone destined for breakwater and training walls was weighed by the Government-appointed weighbridge clerk, George Venable Jones, who also recorded the number of trucks and men employed at the works. For this Jones was paid £3 per week, but was able to supplement his modest income by £12 a year as the resident postmaster.[22] He also earned commission on all stamps he sold.

South Head Quarry was worked on and off over a period of 25 years. During the initial phase, 1862-67, it produced stone for the South breakwater and for the start of the South Training Wall. In the second phase, 1877-86, stone went to extend the training wall to its current length and for a short extension of the breakwater. During the final short phase, 1888-89, stone was used for wall repair and quarry strippings were used to form up the preliminary earthworks for the Angourie Quarry Railway. By then the quarry was essentially worked out. The floor had been excavated to 6ft below sea level and water inflow was creating problems. The cost of stripping off thickening layers of overburden to get more stone was deemed too expensive.

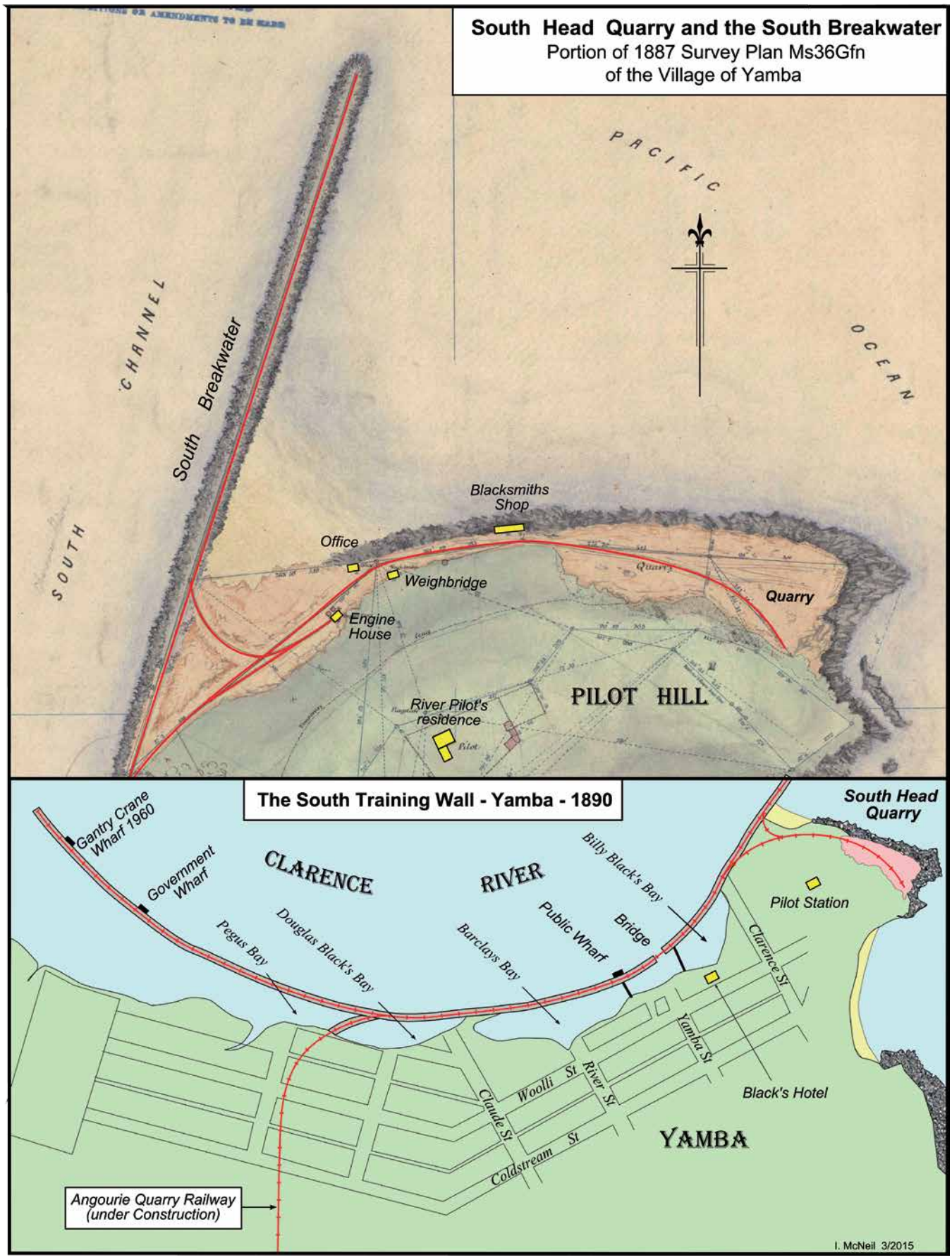
After abandonment, the quarry pit filled with water and for many years was used as a popular swimming hole. It also played a part in the annual week-long 'Tim the Bream' competition run by Ampol Petroleum and compered by the legendary radio and TV personality Jack Davey. Anglers were offered a £10,000 prize if they could catch a tagged bream, affectionately known as Tim. It was a wildly popular event but in spite of the determination shown by hundreds of anglers, Tim was never caught. One of the highlights was Jack Davey's Fishpool, organised especially for mums and kids. The quarry pit was stocked with hundreds of tagged fish which carried prizes worth £1,500.

The pit was filled in in the 1960s and now sees use as a parking area for visitors to Turners Beach and the breakwater wall walk.

The South Head Quarry railway

All quarried stone was transported over a short horse-operated standard-gauge railway to the South Breakwater and the South Training Wall. There were several sidings within the quarry including temporary lines to convey overburden and quarry waste to spoil banks at the water's edge. The Government weighbridge was sited close to the quarry where full trucks of stone and spoil were weighed on their way to the various tip sites.

South Head Quarry circa 1888. Empty standard gauge tip wagons stand on the quarry sidings while in the background is a small steam derrick crane and a steam drilling rig. *Photo: Port of Yamba Historical Society*



Top: South Head Quarry in 1887. The Engine House was built in 1883 by the PWD in anticipation of a steam locomotive being brought in for the works on the south side.
Bottom: The South Training Wall after construction finished in 1886. The bays behind the wall were later named after local identities. The latter-day Gantry Crane Wharf had a 40-ton transporter crane to lift concrete blocks and boulders from barges onto rail wagons for the 1960 – 1973 completion of the South Breakwater.

The rail connection to the siding on the breakwater was laid out by William Baron. It was a tight 2-chain radius curve on a low embankment squeezed in between the side of Pilot Hill and the breakwater's starting point on the river bank. The curve formed an almost complete half-circle, permitting stone trucks to proceed directly onto the breakwater without having to unhitch horses to change direction.[23]

White owned the rail sidings inside the quarry. When his assets were auctioned off in July 1864, they included '*40 tons, more or less, of iron rails with sleepers, etc., complete as now laid down to the quarries*.'[24] The Public Works Department owned the sidings on the breakwater and training walls, the usual practice being to supply materials for the contractors to use. For White's contract it invited tenders in February 1863 for the supply of 1000 sleepers of approved colonial hardwood, to be stacked at the approach to the Clarence River South Breakwater.[25]

John White employed a small fleet of 4-wheel tip trucks to convey stone and quarry spoil. The 1864 auction inventory listed 12 heavy stone trucks, 10 heavy box wagons, 3 heavy side-tip wagons and '*2 large 10-ton trucks, complete, nearly new, having been lately purchased in Sydney at a cost of £150*.'[26] An earlier newspaper report on the works offered up details that the wagons each had 7ft square platforms and weighed between 1½ tons and 2½ tons.[27]

The South Training Wall was an upriver extension of the South Breakwater. To access this construction site the quarry line was extended to give a simple end-on connection onto the training wall, by-passing Baron's tight 2-chain radius half-circle connection to the South Breakwater.

The rail sidings on top of the breakwater and river training walls were extended as required to keep up with the rate of construction. Draught horses provided the motive power, hauling stone trucks out to the tip face where they were trained to step aside just before the tip. There were no grades to speak of; the whole rail system was all basically at one elevation, a few feet above high water mark.

When breakwater construction edged out into open water, large rocks were placed on top of the outer edges of the wall to protect the rails and sleepers from heavy waves, which washed over the wall during winter storms.

The South Breakwater

The South Breakwater was constructed on the line of a submerged reef, which projected into the ocean in a north-east direction from South Head. Construction of the wall began 900ft west of the quarry, and by mid-August 1862 over 18,500 tons of stone had been deposited to form the approach to the breakwater.

Celebrations to mark the laying of the foundation stone of the breakwater took place on 29 September 1862. The paddle steamer *SS Grafton* brought over 400 people down river for the festive occasion. At 1pm the wife of Captain Hill (the Grafton Police Magistrate) smashed a bottle of champagne over three large stone blocks as they glided off a tip-truck into the water. Three cheers were given for the Clarence River Breakwater and for John White, the contractor. Selected guests were invited to White's residence for a sumptuous lunch interspersed with many toasts and speeches.[28]

The breakwater was constructed with an initial side slope of 1 in 2, with the intention of letting natural wave action determine the final stable slope. Moriarty estimated the final slope would be 1 in 5 and as he stated in evidence to the NSW Legislative Assembly a few months after construction began: '*We always expect breakwaters to wash down to the inclination at which it will resist the sea*.'[29] This required top-up stone added from time to time as the breakwater wall settled into a stable configuration.

Stones used in breakwater construction ranged from three to ten tons each. The minimum acceptable weight was three hundredweight with the smaller stones being used for packing into the interstices between larger ones.

The workmanship was described as '*rough, but extremely solid*.'[30] John Connell Laycock, the local Member of Parliament, was less complimentary in a scathing letter he wrote to A.T. Holroyd, the Secretary for Public Works, a year after construction started:

The breakwater now in the course of construction is only in width barely sufficient to allow one truck to traverse to and fro along its surface at a time. Portions are occasionally washed away by the heavy seas, and always will be washed away at its present height and width, more particularly as the work progresses, as it will be continually subject to incessant shocks and lashed by terrific waves which would require a breakwater of thrice the present width to withstand in perpetuity. Far better to proceed … making it wider, higher, and strengthen it as you proceed with stones of heavy calibre, not less than 15 tons (the heaviest required by the present contract being 10 tons).[31]

Progress slowed as the breakwater inched out into deeper water, requiring considerably more stone for each extra foot gained. At the final 1000ft tip-face, the wall was 36ft high, 100ft wide at the base and 15ft wide at the top.

When White's contract was completed in June 1864, 400ft of approach wall and 600ft of breakwater wall had been constructed. There remained £4114 unspent of the £20,000 vote, but Engineer-in-Chief Moriarty did not consider it advisable to extend the breakwater further seawards until the northern breakwater was proceeded with.[32]

Twenty years later the Government authorised a 300ft extension of the breakwater. The work was assigned to Smith and Rowe who already had a contract underway to complete the South Training Wall. The railway line on the South Breakwater was relaid and ballasted, and by October 1884 Edward Moriarty was able to report to the Parliament that the breakwater had been extended by 160ft.[33] When all construction was suspended at Clarence Heads in July 1886, Moriarty's breakwater was 1250ft long and there it stayed until the final construction phase began in 1953.

The South Training Wall – first construction phase 1862–67

Moriarty's improvement scheme specified a 10,170ft long training wall along the Yamba shore to channel the current and protect the river bank from erosion. The wall was to stretch in a continuous curve from the start of the South Breakwater at the foot of Pilot Hill and run for two miles upriver towards Rabbit Island. As it would not be exposed to the destructive forces of ocean waves it would be smaller than the breakwater wall and could be constructed with smaller stone. Moriarty estimated that only three tons of stone would be needed for each lineal foot of training wall as compared to 95 tons for each foot of breakwater.

John White began construction of the South Training Wall along with the breakwater, utilising quarry spoil and reject stones. Some 500ft had been built when he was bankrupted in mid-1863. His trustees completed a further 200ft at the finish of the breakwater contract in June 1864.[34]

In May 1864 the Department of Public Works invited tenders to extend the training wall another 1000ft, specifying that the successful tenderer would be required to post a penal bond of £200.[35] Tenders closed in July and next month the contract was awarded to James W. Wiseman.[36] Wiseman was in partnership with his nephew, Henry Parker Wiseman, and

Top: *THEN: Yamba public wharf on the South Training Wall circa 1910. Yamba was a popular summer holiday destination in earlier times.*
Photo: Port of Yamba Historical Society

Above: *NOW: The same location on the Yamba waterfront in 2014. The course of the old railway is now a pleasant riverside walk.*
Photo: Robin Knight

South Head Quarry, 2013, with the South Breakwater in the background. The quarry floor is now a car park and a picnic area. Rock was quarried out to below sea level, leaving only a narrow rim as protection against breaking waves. *Photo: Robin Knight*

with William Howard Rolfe, the wealthy Sydney timber merchant who had been associated with John White. Henry Parker Wiseman moved to Yamba to manage the contract and took up residence in John White's house near Pilot Hill. The Wisemans were able to start work almost immediately, an indication that they had acquired the quarry plant that White's creditors had put up for auction at Clarence Heads.

Henry Wiseman's quarry workers spent the first couple of months stripping overburden at South Head Quarry to expose fresh stone. In early November the local paper reported that a monster blast, '*one of the largest in the colony*' had taken place in the quarry. Two 33ft deep shafts had been sunk 30ft behind the quarry face and packed with 520lbs of gunpowder. When set off, upwards of 5000 cubic yards, or about 10,000 tons of stone, were lifted several feet in the air. Unfortunately, the paper reported, half of this fell into the sea.[37]

The South Training Wall now forms part of the Yamba foreshore. Originally it was constructed some 100ft offshore, the area behind it being reclaimed with dredge spoil in the 1950's. During construction the course of the wall was marked out by one inch diameter iron bars driven firmly into the river bed. The tops were a few inches under water at high tide which caused some consternation amongst local boatmen, nearly impaling their craft on several occasions.[38]

The rail line from the quarry was extended along the top of the training wall, keeping pace with the tip head. Quarried stone was loaded onto 4-wheel tip trucks and hauled by draught horse to where it was to be tipped. One of the few accidents reported during this period occurred on the training wall. A young lad named William Frame was run over by a stone truck, gashing his leg severely and smashing his fingers.

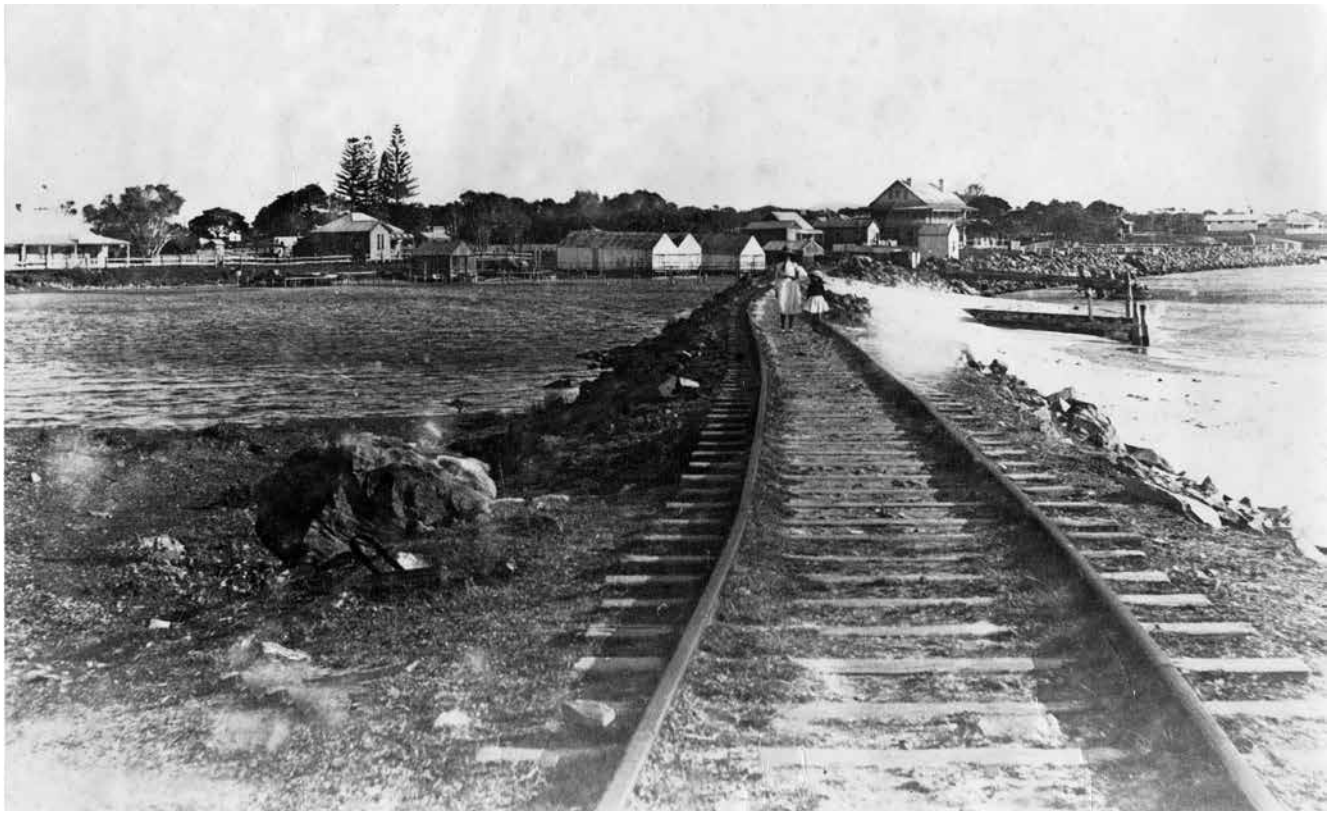
The Wisemans completed their first contract for 1000 feet of training wall at the end of 1865 for which they were paid £4415.[39] They were awarded a further contract for an additional 1000 feet in April 1866 for payments totalling £4532.[40] When this contract was completed in March 1867, the South Training Wall extended for 2700ft along the Yamba foreshore, but it was a long way short of Moriarty's planned 10,170ft.

Although £4,100 of the original vote remained, Moriarty elected to wait before doing any more work until it became clear what effects the South Breakwater and the South Training Wall had made on the river entrance. Nine months later the brig *Alpha* took shelter in the Clarence River during inclement weather. While there her master accepted a charter to remove the whole of the plant used in the breakwater construction.[41]

The South Training Wall – second construction phase 1877–86

It was ten years before construction resumed on the South Training Wall. Conditions at the entrance began to deteriorate from 1870 onwards. Heavy floods washed away the lower parts of the North Sand Spit and by 1873 the river entrance had doubled in width and was shoaling. Three ships (the brig *Sarah*, the steam barque *Examiner*, and the schooner *Coquette*) were wrecked at the entrance between 1870 and 1873. Two years later the screw steamer *Helen McGregor* was wrecked on the Black Buoy Reef just inside the heads with the loss of eight lives.[42]

The deteriorating conditions focussed the Government's attention back to the task of improving conditions at Clarence Heads. It authorised work to start on the northern breakwater in January 1873 but preparations were tardy and it took another three years before tenders were invited. The contract went to Macquarie, Noble and Co, a partnership between Daniel Macquarie, an experienced contractor, and James Harvey Randall Noble, a Sydney businessman.[43]



Top: *THEN: The standard gauge South Head Quarry Railway on the South Training Wall with Billy Black's Bay on the left and the Clarence River on the right. The quarry, breakwater and river entrance were behind the photographer. Photo: Port of Yamba Historical Society.*
Above: *NOW: The same location in 2015. The South Training Wall is now a foreshore river walk. Billy Black's Bay was filled in with dredge spoil in the 1950s and is part of Yamba Caravan Park. Photo: Rob Knight*

An 1888 panoramic view of the South Training Wall extending up river towards Rabbit Island. The two small coastal steamers are docked at Yamba's public wharf. The bays behind the wall were filled in with dredge spoil during the 1950s and 60s. Photo: Port of Yamba Historical Society

As well as authorising work on the north breakwater, the Government also voted £10,000 in July 1876 for the completion of the South Training Wall. This contract also went to Macquarie, Noble and Co but without going to public tender. The Secretary for Public Works, Mr. Lackey, defended this course of action in Parliament, explaining that tenders were not invited in order to save time, to prevent the vote from lapsing, and to obtain the advantage of having the same contractor working on both sides of the river.[44]

Payment and conditions for the South Training Wall were the same as those granted for the northern works; 3s 6d per ton for stripping, 3s per ton of stone tipped to form walls, 7½d per ton railway haulage for distances under half a mile with an additional 7½d per ton for every half mile beyond that distance. For re-laying the railway on the training wall the contractor would get 2 shillings per lineal yard with the Government to supply the sleepers, rails and dogs, and place them on site.[45] In January 1877 the Public Works Department invited tenders for the supply of 3000 sleepers for the contract.[46] A few months later the *Southern Cross* delivered '*100 tons of railway irons and 2 boxes of powder*' for the south wall extension.[47]

Macquarie and Noble started work on the south side in June 1877. The company re-opened South Head quarry and advertised for tenders to re-lay the railway from the quarry to the South Training Wall.[48] Once again draught horses hauled stone trucks between South Head Quarry and the advancing tip face on the South Training Wall.

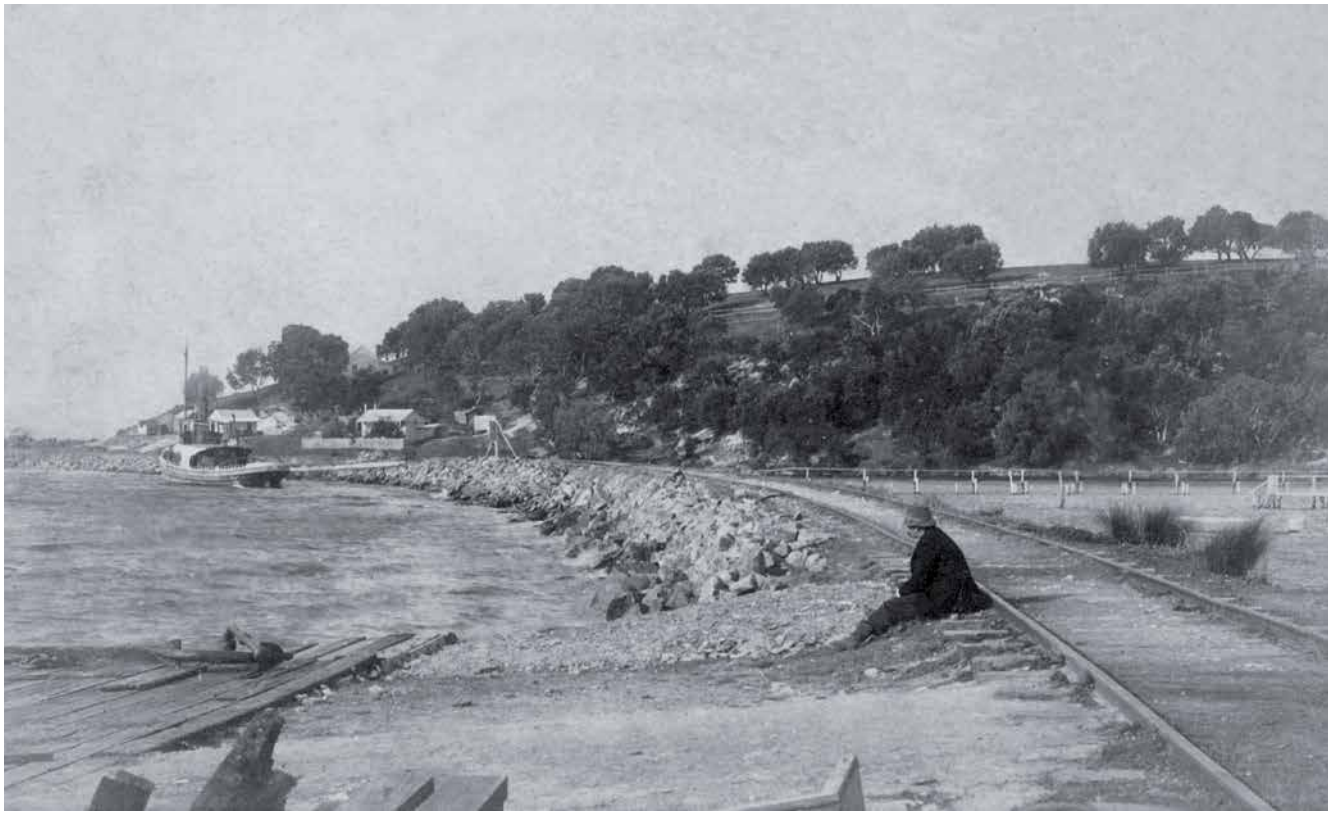
One of the horse drivers was unfortunately killed on the line in August 1878. Andrew O'Neill had discharged a load of stone at the tip head and was returning to the quarry with the empty truck. He attempted to jump on to the moving truck sideways and missed his footing. After two or three attempts to recover himself he fell under the heavy truck and the two rear wheels passed over his back. His shocked off-sider saw him jump up off the rails and exclaim '*I'm done for!*' In great pain he was taken on a stretcher to the nearby Black's Hotel in Yamba and given some brandy. A doctor and a priest were summoned but O'Neill succumbed to his injuries shortly after they arrived. At the inquest a verdict of accidental death was returned, a reflection of the *laissez faire* attitude to workplace safety prevalent in earlier times.[49]

Daniel Macquarie dissolved his partnership with James Noble in October 1879[50] and carried on the contract by himself. By early 1882 he had extended the South Training Wall by another 2000ft bringing up its total length to 4750ft, still short of Moriarty's 10,170ft. Although Macquarie continued to work on the north side of the river, the Government elected in May 1882 to invite fresh tenders to continue the extension of the South Training Wall.[51] This contract was won by the Sydney contracting firm of Rowe and Smith.[52]

Rowe and Smith had begun its partnership earlier in the year with a government contract to construct a section of the main Southern Sewer in Sydney. It won its biggest contract the following year, in July 1883, for the construction of Section No 2 of the Illawarra railway, which was worth £440,000. It was a huge job, involving the construction of seven tunnels and the excavation of over a million tons of rock.[53] Mr. Rowe, the senior partner, moved to Otford to supervise the job. The Clarence contract must have seemed small beer by comparison.

Mr. W. Smith, the junior partner, moved up to Yamba and wasted little time getting started. By November 1882 he was getting stone out of South Head Quarry at the rate of 3000 tons per week, one third above the amount stipulated in the contract.[54] In May 1884 it was announced that work would also begin to extend the South Breakwater, and Rowe and Smith got the job. The railway line on the breakwater was relaid and ballasted, and by October Edward Moriarty was able to report to the Parliament that the breakwater had been extended by 160ft.[55]

Twelve months later a visitor to the Clarence reported on the activities of Rowe and Smith at the Heads. Large blocks from South Head Quarry were going to the breakwater and smaller stone was sent to the training wall. The breakwater will be continued, he wrote, for a further 250ft while the 6150ft long training wall was to extended a further 4000ft.[56]



Top: *THEN: The South Training Wall looking towards Pilot Hill and South Head circa 1895. The start of the South Breakwater leads off in the left background. Photo: Port of Yamba Historical Society*
Above: *NOW: The same scene in 2013 with Yamba Ferry Wharf on the left. The railway is long gone and the route is now a very popular riverside walk. Photo: Rob Knight*
Right (page 15): *Vale and Lacy No 1 of 1866 abandoned on the old Angourie Quarry Railway south of Yamba in the 1930s. Unfortunately no photographs of the locomotive in service have been found. Bart Wiles Photo – Richard Horne collection*

The South Head Quarry railway locomotive

In 1883 the PWD spent £181 to erect a locomotive shed at South Head Quarry and the same year spent another £1418 on purchasing and repairing plant for the south side works.[57] This included the cost of repairing and overhauling a locomotive in Sydney in preparation for work being resumed on extending the South Training Wall.

The locomotive in question was a small second-hand 0-4-2 saddle tank, Vale and Lacy No 1 of 1866 (V&L),[58] which had the distinction of being the first locomotive manufactured in the colony of NSW. It was built for railway contractors Larkin and Wakeford, who used it for construction work on the Great Western Railway across the Blue Mountains, then on the Great Northern Railway in the Upper Hunter Valley. It was acquired by the PWD in 1874 to haul stone from Iluka Bluff Quarry to the breakwater works on the north side of the Clarence River.

The V&L proved to be a poor investment. During its nine months of operation on the Iluka Quarry Railway it broke down on a regular basis, bringing breakwater construction work to a halt for up to weeks at a time. It was the brunt of some stinging criticism, including this letter to the editor from a correspondent signing himself '*Vitrol*':[59]

'*The many obstacles which have been thrown in the contractor's way, first and most important, has been the systematic breaking down of the locomotive which again occurred yesterday about 5pm. Since the 2nd of October last to the present time, not less than 55 days have been lost to the contractor, and the navvies whose wages alone would amount for that period to nearly £600 sterling. Now, sir, it appears that this so-called engine was condemned 7 years ago, but through some hanky-panky was foisted upon the Government for £500! (not worth £100), since which repairs, alterations, and other outlays bring up the cost of this wretched specimen of decayed mechanism to about £1000! And she, or it, is now worthless.*'

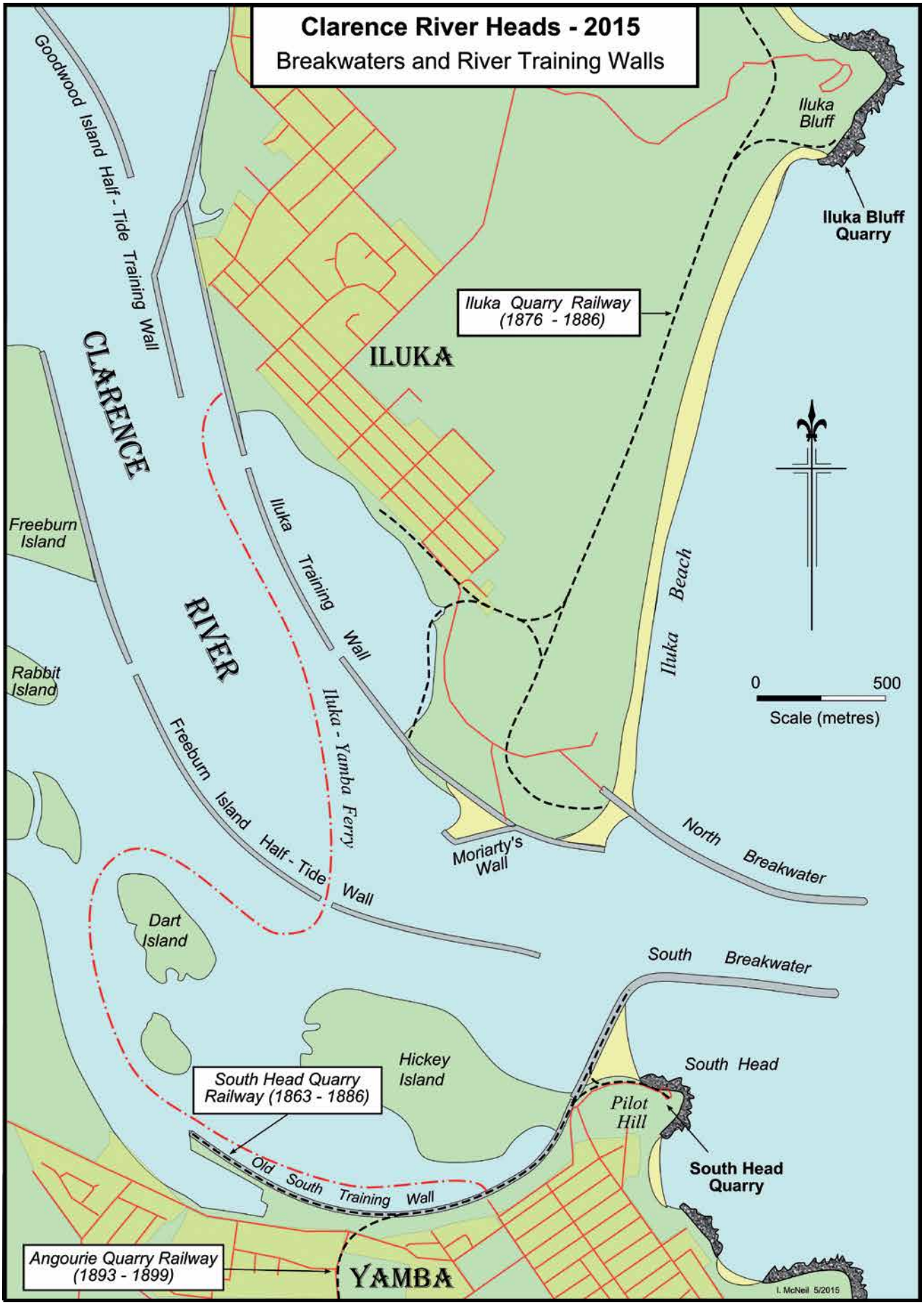
A replacement locomotive, ex Waratah Coal Coy's 0-6-0ST Manning Wardle (163 of 1865), was dispatched from Newcastle in March 1877.[60] It is doubtful if the V&L saw any further service on the Iluka Quarry railway as traffic was light and intermittent due to serious setbacks in breakwater construction.

The V&L locomotive was sent to Sydney for repairs and an overhaul, and was returned to Yamba in 1883 to haul stone from South Head Quarry to extend the South Training Wall. According to newspaper reports, it was an ignominious failure:[61]

Work has not been commenced yet at the Heads for the extension of the southern dyke. It is said the contractor has been up and ready to commence work for upwards of two months. The Government locomotive was sent to Sydney for repairs and to undergo a thorough overhaul; but when it was returned and steam was got up, I hear it would not work, only in a very perverse manner, by forcing water into the cylinders and steam into the funnel. I don't know very much about locomotives, and this may be the way they commence their work, but if such is the case the people at Yamba do not understand it either, and at any rate could not get it to work.

It appears the V&L was banished to the engine shed and horses were substituted to haul the stone trucks instead. When construction of the Angourie Quarry Railway was about to begin in early 1891 reference was made to '*the unused locomotive at the Clarence Heads*'[62] being made available to the contractor. Although there is no record of this having occurred, it may have been the last time the locomotive turned a wheel in anger.

The unloved and unwanted locomotive was abandoned on an unrecovered section of the Angourie Quarry Railway south of Yamba after that railway closed in 1900. It was still there in October 1918 when the PWD invited tenders for its purchase.[63] There were no takers and there it stayed. Its decaying remains were photographed by the late Bart Wiles in the 1930s, and the rusted remnants of its saddle tank by Dr John Kramer some 50 years later.



The construction of the 19th century river training walls and the modern breakwaters at the entrance to the Clarence River radically altered its shape. The North Sand Spit disappeared. Hickey and Dart Islands were formed on the south side of the river by massive quantities of tide-deposited sand.

An aerial view of the South Breakwater. The straight section in the foreground was built on Moriarty's watch in the 1860's, the remainder 100 years later. The short stub projecting into the river is the T-piece, formed in the 1890's when a storm washed away the end of the breakwater.
Photo: Rob Knight collection

Abandonment of the southern works

Between 1862 and 1885 over £117,000 had been spent on river improvement works. While construction on the south side of the river had been relatively straightforward, the engineers had experienced enormous difficulties on the north side. Government procrastination, lack of funds, the instability of the North Sand Spit and difficulties in obtaining sufficient stone meant little progress had been made. Conditions at the entrance were arguably worse than back in 1862.

When Sir John Coode, the pre-eminent British harbour engineer of his time, visited Australia in 1885 the Government engaged him to examine several of its problem river entrances, not least of which was the Clarence. He visited Clarence Heads in October 1885, inspected the river entrance and Moriarty's harbour works, and interviewed a number of veteran steamer captains.[64] He requested a large number of detailed measurements and hydrographic surveys to be carried out and the results sent to him back in England. Pending the receipt of Sir John's report, the Government suspended all work at Clarence Heads in July 1886, and the men paid off.[65]

Sir John Coode submitted his report to the NSW Government in November 1887. He recommended a significantly different scheme of improvement works for the Clarence,[66] which was duly accepted. This marked the end of Moriarty's scheme and of his 30-year career with NSW Public Works. He retired the following year[67] and returned to England to live out his retirement.

When work resumed several years later, only Moriarty's short South Breakwater was incorporated into Sir John Coode's scheme. The partly-completed north-side walls were dismantled and their stonework was recovered to use in the new works. The long South Training Wall was retained but only to protect the Yamba river bank from flood damage. The space behind it was eventually filled in with dredge spoil, and it now forms the modern-day Yamba foreshore with a very pleasant riverside walk along its course.

The railway line on top of the training wall remained in use for many years. There was a Government wharf located near the western end of the wall. During the 1890s a branch line connection to the Angourie Quarry Railway enabled stone blocks from Angourie Quarry to be railed to the South Breakwater to repair storm damage.

When the modern-day Yamba breakwater was finally constructed in the 1960s (almost 100 years after first being proposed) the training wall was strengthened and the railway relaid along its entire length to the breakwater. 40-ton concrete blocks and sandstone boulders were barged 18 miles downriver from Woodford Island Quarry and unloaded by a diesel gantry crane at the old Government wharf site. They were hauled on 4-wheel tip trucks by small diesel locomotives 1½ miles to the tip head on the breakwater. It could be said that of all the Clarence River breakwater railways, the South Head line was the longest-lived.

Acknowledgements

The very substantial assistance given by fellow researchers Rob Knight and Jon Henry is gratefully acknowledged. Thanks are also due to the Port of Yamba Historical Society for access to its photograph and manuscript collection, and to the staff of Plan Services section of the NSW Department of Finance and Services for assistance to locate early PWD survey plans.

Panoramic view of the quarry face of South Head Quarry 2015. The dark-coloured lower layers of rock were the hard blue sandstone used for breakwater construction. The lighter coloured upper layers were softer rock which had to be run to spoil. Photo: Ian McNeil

End notes and references

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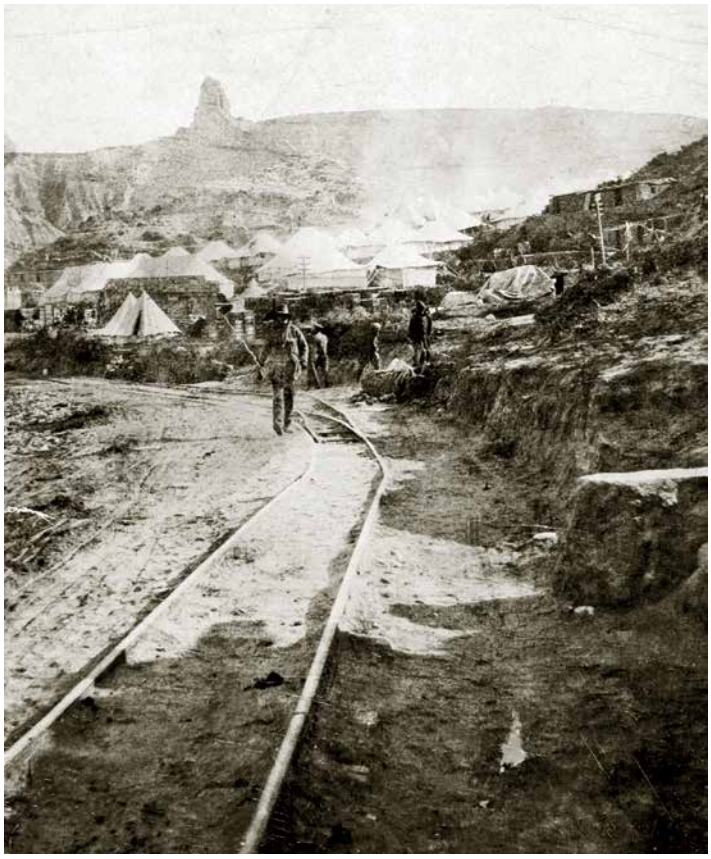
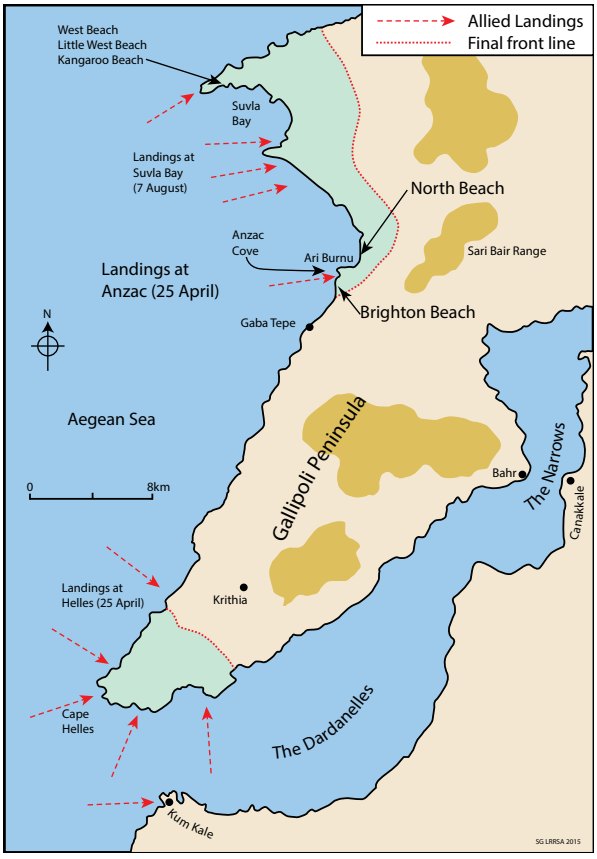
Australian Light Railways on the Gallipoli Peninsula, 1915

In *Light Railways* No.206 (April 2009) Trevor Edmonds and Jim Longworth wrote a most interesting account about the hitherto ignored light railways used at Gallipoli – *The Australian light railways of the Gallipoli campaign.* Light railways were used at a number of sites on the Gallipoli Peninsula in Turkey, which was then part of the Ottoman Empire. The two of most interest to Australians are the ANZAC Light Railway, which ran from Brighton Beach to Anzac Cove to North Beach, and the Suvla Bay Light Railway, about 15km to the north. The first Gallipoli landings, effected by New Zealand and Australian troops at what is now Anzac Cove, commenced early on 25 April 1915. French and British troops landed at the same time at Cape Hellas, to the south. It seems that the Anzacs were landed along a small front instead of the planned longer coastal frontage and found themselves facing near-impossible terrain. The Allied plan – to capture the Dardanelles, the narrow, but vital sea passage to Constantinople (Istanbul) and the Black Sea– was stymied by fierce Turkish resistance. Three-and-a-half months later, commencing on 6 August, British forces landed at Suvla Bay to try and break the stalemate. Again, various blunders and failures resulted in the Turks limiting the extent of the landings. Eventually, the Suvla Bay and Anzac Cove areas were joined but at no time did the total Allied area occupied exceed 20 sq km. Landing with the British at Suvla Bay was the 1st Royal Australian Naval Bridging Train (1RANBT) commanded by Lieut Cmdr Leighton Bracegirdle RAN. Its task was to build pontoons, piers and other infrastructure including light railways for the landing and transport of the thousands of tons of equipment and ordnance at that place. Further south, at Anzac Cove, a light railway was also constructed, probably during October 1915 by the Railway Supply Detachment 11th Coy Australian Army Service Corps. After eight fruitless months, of mainly trench warfare, evacuation took place in December with the last Anzacs leaving on the twentieth of that month.

Phil Rickard





Above: ***Anzac*** *The view at North Beach. The landmark in the background, was known to the Anzacs as The Sphinx. The tents are part of a major casualty clearance station, hospital and field ambulance service.*
Photo: Australian War Memorial P08097.010
www.awm.gov.au/collection/P08097.010/

Right: ***Anzac*** *Looking almost due east from the Ari Burnu headland, to North Beach. Both the light railway and the 'road' were used to move stores between Anzac Cove, North Beach and Brighton Beach.*
Photo: Australian War Memorial P00037.001
www.awm.gov.au/collection/P00037.001/

Left: ***Anzac*** *Looking north across Anzac Cove to Ari Burnu. Three jetties are visible, the two more distant seemingly having 2ft-gauge tramways, accessed via a turntable at the jetty base. In the distance, the tramway continues around the headland (Ari Burnu) to North Beach, seen in the photos on the previous page and, behind the photographer, to Brighton Beach*
Photo: Australian War Memorial A02852
www.awm.gov.au/collection/A02852/

Right: ***Suvla Bay***
As mentioned, the British landing at Suvla Bay was accompanied by 1RANBT commanded by Lieut Cmdr Leighton Bracegirdle RAN. Two photograph albums compiled by Bracegirdle are now in the AWM, and show some of the work done by his Bridging Train. This dramatic image, however, depicts the impact of a Turkish high explosive 8.2 inch shell amongst their stores and beside the tramway. Dated September 1915, it is worth comparing with the photo in LR206, page 7, both, presumably taken by Bracegirdle.
Photo: Australian War Memorial P11165.002.001
www.awm.gov.au/collection/P11165.002.001/

Left: ***Suvla Bay***
At the far north-western end of Suvla Bay a number of adjacent rocky coves possessing some depth of water were transformed into landing places. These included West Beach, Little West Beach, and Kangaroo Beach. Initially, 1RANBT was tasked with building pontoon landings at some, if not all, of these. Associated with this were tramways in order to shift the tens of thousands of tons of supplies and ordnance.
Photo: Australian War Memorial G00598
www.awm.gov.au/collection/G00598/

Right: ***Suvla Bay***
In the upper right portion of the photo at the bottom of the opposite page, the tramway enters into a cutting, transcribes a part circle and accesses various supply and ordnance depôts. Here we have some 'volunteers' on excavation duty, aided by a number of standard 2ft-gauge side-tipping skips. At right, a flat truck sits on ground level. This work was probably done jointly with the Royal Engineers. 1RANBT remained at Suvla Bay until final evacuation. Bracegirdle (1881-1970) was awarded the DSO in June 1916 and retired in 1945 with the rank of rear admiral.
Photo: Australian War Memorial P11165.006.001
www.awm.gov.au/collection/P11165.006.001/

Left: ***Suvla Bay***
Looking towards West Beach landing (the opposite direction from the above photo). The light railway seems to be made of standard pre-fabricated panels with steel sleepers. Another line leads off to the right, passing stacks of rails and other supplies. Two road trucks are seen in the background and immediately offshore is a hulk, filled with stones, that 1RANBT used to create a makeshift breakwater.
Photo: Australian War Memorial A01245
www.awm.gov.au/collection/A01245/

Right: ***Suvla Bay***
The rusting hulk of the ss Pina, *seen in the background of the above photo, had been sunk offshore to form a breakwater to protect the main landing place at West Beach. Nonetheless, when severe gales hit the Gallipoli Peninsula in late November 1915, great damage was done. Shown here is the wrecked remains of the West Beach pier. 1RANBT rebuilt it in time for the final evacuation in late December; the bridging team being the last Australians to leave Gallipoli.*
Photo: Australian War Memorial P11165.015.001
www.awm.gov.au/collection/P11165.015.001/

Industrial Railway NEWS

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Special thanks to contributors to the *Sugar Cane Trains/Navvy Pics* 2ft Facebook page.

NEW SOUTH WALES

BLUESCOPE STEEL
Port Kembla Steelworks
(see LR 243 p.18)
1435mm gauge
On 8 August the Strange Modelers of Universal Trains operated a chartered bus tour of the Bluescope steelworks at Port Kembla. During the tour, 850 HP English Electric B-B DE locomotives D27 (A-040 of 10/1960) and D28 (A-053 of 1961) were noted in service, as well as one 1000 HP English Electric B-B DE loco which would have been either D36 (A237 of 1971) or D40 (A241 of 1972). It is possible at least one more might be available for service, but this is unconfirmed. D40 was photographed in service during early July. Several of the PB class locomotives were also seen in use. Ex VR Clyde B-B DE T379 (64-334 of 1964) was noted in Cringila exchange sidings and believed to be also intended for use within the steel terminal.
Brad Peadon 8/15; Chris Gordon 8/15; Scott Gould 8/15; Chris Walters 8/15

QUEENSLAND

CURTAIN BROTHERS (QLD) PTY LTD,
Townsville
(see LR 243 p.18)
1067mm gauge
Ex Tasrail Emu Bay Railway Walkers B-B DH 1104 (641 of 1970) has been donated to Loco Shed North Queensland for preservation and on 5 August was road transported to their site at the Bohle which is on the northern side of Townsville.
Peter Renton 8/15

Top: *On its way to the full yard with cane from the Little Mulgrave line on 25 July is Mulgrave Mill's Com-Eng 0-6-0DH 8* Charringa *(A1926 of 1958). Photo: Luke Horniblow* ***Above:*** *English Electric B-B DE D27 (A-040 of 10/1960) sits with a loaded torpedo wagon at Bluescope's Port Kembla steelworks on 8 August. Photo: Scott Gould*

ISIS CENTRAL SUGAR MILL CO LTD
(see LR 238 p.24)
610 mm gauge
Bradken at Boogan, near Innisfail, have been manufacturing new bins for Isis Mill on a yearly basis for some time. Isis is expecting to crush 1.3 million tonnes of cane this year which is much improved on last year's figure. A car collided with one of the mill's trains in Childers on 22 August. The car was spun around and only minor injuries resulted.
Luke Horniblow 6/15; *NewsMail* 20/6/2015, 23/8/2015

MACKAY SUGAR LTD, Mackay mills
(see LR 244 p.22)
610mm gauge
EM Baldwin B-B DH 17 *Langdon* (9562.2 6.81 of 1981) which was last reported on loan to Racecourse Mill was back working at Marian Mill by 18 July. On 3 August, Farleigh Mill's EM Baldwin B-B DH *Foulden* (7220.1 6.77 of 1977) was seen on loan to Racecourse Mill where EM Baldwin B-B DH *North Eton* (6780.1 8.76 of 1976) was out of service with convertor problems.
Hayden Quabba 7/15, 8/15

MSF SUGAR LTD, Mulgrave Mill
(see LR 244 p.22)
610mm gauge
In July, a number of 10 tonne bins were seen with a small extension at the top.
Luke Horniblow 7/15

MSF SUGAR LTD, South Johnstone Mill
(see LR 244 p.22)
610mm gauge
Ex Mulgrave Mill Clyde 0-6-0DH locomotives 23 *Behana* (55-56 of 1955) and 24 *Pyramid* (56-90 of 1956) were seen stripped down for rebuild on 9 August. On the same day, Com-Eng 0-6-0DH locomotives 4 *Harvey* (AD1138 of 1960) and 5 *Bramston* (AH2460 of 1962) which had received new motors and transmissions during the slack were seen bringing a load through Miriwinni. Clyde 0-6-0DH 12 (55-60 of 1955) which had been rebuilt last year was seen in service during August.
John Browning 8/15; Mitch Zunker 8/15

Top: *South Johnstone Mill EM Baldwin B-B DH 25 (6470.1 1.76 of 1976) on the North Johnstone River bridge on 28 July. Photo: Tony Bennett* ***Centre:*** *Heading out through the centre of Mossman during July are Mossman Mill's Clyde cow and calf multi-unit 0-6-0DH locomotives* Habana *(60-215 of 1960) and* Marian 11 *(56-104 of 1956). Photo: John Kramer* ***Above:*** *Seen heading to the mill with a rake of fulls during July was Millaquin Mill EM Baldwin B-B DH* Barolin *(6456.1 11.75 of 1975). Photo: Tim Irwin*

WILMAR SUGAR (HERBERT) PTY LTD, Herbert River Mills
(see LR 244 p.23)
610mm gauge
Owing to breakdowns in the locomotive fleet, there was much interchange of locos between Victoria Mill and Macknade Mill during the early stages of the crushing season. On 3 July, Macknade Mill's EM Baldwin B-B DH *Wallaman* (6400.3 4.76 of 1976) with Clyde 4-wheeled brakewagon BV6 (CQ3477-2 of 1976) went to Victoria Mill and that mill's Clyde 0-6-0DH *Ingham* (64-382 of 1964) went to Macknade. The *Wallaman* with BV6 returned to Macknade on 4 July only to be sent back to Victoria on 5 July. The *Ingham* returned to Victoria Mill on 13 July. Overnight of 30/31 July, the *Wallaman* and BV6 returned to Macknade and promptly failed that same day with a broken axle. It was taken by road transport from Hawkins Creek to Victoria Mill for repairs and BV6 was went back to Macknade. Following repairs, the *Wallaman* reappeared at Macknade on 7 August but 9 August saw it and BV6 sent to Victoria Mill yet again. The same day, Victoria Mill's Clyde 0-6-0DH *Perth* (69-682 of 1969) went to Macknade. Victoria Mill's *Ingham* was borrowed by Macknade for a shift on 12 August. *Wallaman* and BV6 came back to Macknade on 13 August then in a surprise move on 15 August, Clyde 0-6-0DH *Canberra* (65-433 of 1965) was sent to Victoria but returned on 23 August. This loco has been resident at Macknade for almost 12 months. The *Perth* returned to Victoria Mill on 21 August. Macknade Mill's EM Baldwin 0-6-0DH *Hobart* (4413.1 7.72 of 1972) saw an extended period of use on the sugar trains to Lucinda during August owing to EM Baldwin 0-6-0DH 14 (6/2490.1 7.68 of 1968) being out of action with final drive problems.
On 1 August, Hudswell Clarke 0-6-0 *Homebush* (1067 of 1914) hauled passenger trains on the Nyanza line for the annual Italian Festival.
A new siding is being built at the end of Pietrobons line in Macknade Mill's Hawkins Creek area. This siding commences at the present end of line and will add around half a kilometre to the length of the line.
During August, *The Discovery Channel* was filming rail operations in the Herbert for an upcoming documentary.
Editor 7/15, 8/15

WILMAR SUGAR PTY LTD, Pioneer Mill, Brandon
(see LR 242 p.25)
1067mm gauge
Walkers 0-6-0DH *Aramac* (583 of 1968) was struck by a car at the Sheep Station Creek level crossing on the Bruce Highway near Brandon on 19 August. The loco ended up at right angles to the track and with bins piled up against it. The driver of the loco received minor injuries.
Andrew Matt 8/15; *The Burdekin Advocate* 19/8/2015; *Townsville Bulletin* 19/8/2015

WILMAR SUGAR (PLANE CREEK) PTY LTD, Plane Creek Mill, Sarina
(see LR 243 p.20)
610mm gauge
Once again this year, Clyde 0-6-0DH D1(56-101 of 1956) has been stationed at the end of the Plane Creek line to service sidings beyond a bridge which is no longer capable of being traversed by a loco.
Scott Jesser 8/15

WILMAR SUGAR (PROSERPINE) PTY LTD, Proserpine Mill
(see LR 244 p.24)
610mm gauge
After several years out of service, Clyde 0-6-0DH 8 (65-443 of 1965) is being rebuilt.
Tom Badger 8/15

OVERSEAS

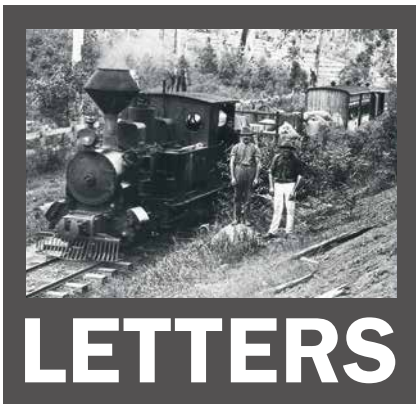
FIJI SUGAR CORPORATION
(see LR 244 p.24)
610mm gauge
The Nasau road/rail bridge on the Nasau branch in the Nadi area of the Lautoka Mill rail system was expected to reopen early in September after being closed in mid-August due to a burst water main that scoured the embankment at one end of the bridge.
The residents of Vuda and Saweni, south of Lautoka, have had a rail push bike built by Tempo Cycles of Lautoka for the local police to use when attending emergency calls in the Saweni area. This community has poor road access and the mill railway is conveniently situated. The Fiji Sugar Corporation has given approval for the use of its trackage with the Vuda Police having to ring the mill before setting off along the line.
A New Zealand consultancy firm 3D Consultants has plans to boost the production of sugar cane in Fiji from 2 million to 5 million tonnes by 2020. This is proposed to be done by introducing mechanised large scale farming and streamlining transportation systems.
Radio New Zealand International 19/8/2015; *The Fiji Times* Online 17/8/2015,19/8/2015, 24/8/2015; www.fijiroads.org 18/8/2015, 21/8/2015

Plane Creek Mill EM Baldwin B-B DH D12 (6890.1 10.76 of 1976) approaches the Bruce Highway with a rake of 145 four-tonne fulls on 15 July. Photo: Hayden Quabba

Above: *The dramatic results of a car colliding with Pioneer Mill Walkers 0-6-0DH* Aramac *(583 of 1968) at the Sheep Station Creek level crossing on the Bruce Highway on 19 August. Photo: Andrew Matt*

Left: *Lined up and ready to go on rakes of empties at Invicta Mill on 26 July are left to right Invicta Mill bogie brakewagons* Minkom *(built 1996),* Clare *(built 1995) and* Kilrie *(built 1991). Photo: Jamali Labelak*

Below: *With your editor in control on 27 July, Macknade Mill EM Baldwin B-B DH 20 (7070.4 4.77 of 1977) heads for home on the inter-mill link to Victoria Mill with a load it collected in that mill's Hamleigh area. Photo: Luke Horniblow*



LETTERS

Please send letters to:
Editor: Scott Gould
PO Box 21, Williamstown, Vic 3016
e-mail: editor@lrrsa.org.au

Mt Keira (LR 242)

I read the field report on Mt Keira Tramway with much interest. As a long-time resident of Wollongong, particularly in and around the suburbs of Keiraville, Mt Keira, West Wollongong and Figtree, Mt Keira Mine has never been far away from me. Indeed, as a schoolboy at The Illawarra Grammar School in the late 1970s and early 1980s, I often looked up to the mine buildings which at that stage were still in use. Later, as a public servant in the late 1990s and early 2000s, my desk looked over the South Coast Line, and up to Mt Keira, where I watched the rehabilitation works slowly remove much of the mine buildings I had grown up with. I was also near to the old formation of the Mt Keira Tramway that crossed Denison Street - but was disappointed to learn only now from your report that I drove past the old embankment every day!

However, my reason in writing is to put a little more "flesh on the bones" for you, as I recall or can place some of the infrastructure still (barely) visible. I understand there were exchange sidings with the government line on the southern edge of Beaton Park, where Tramway Bridge is now. As a schoolboy, I often ignored school athletics carnival events, looking at was then waste ground - and realising that I was seeing the old siding location. (Giff Eardley's book was in the school library, and was read by me many times!) The Gasworks was also extant in those days, only meeting its demise when Wollongong was connected to the natural gas supply in 1977 and it became surplus to requirements. Its location was roughly at the rear of Collegians Leagues Club, off Flinders Street - it was slowly removed over the next few years. (The Facebook site "Lost Wollongong" has some photos of the cokeworks, I recall, with some useful notes on it by fellow "Losties".)

Also of note - until electrification and the severing of Gipps Street at the level crossing with the South Coast Line, the signal box that controlled the barriers was not "North Wollongong" as one might have expected, by "Mt Keira Signal Box", possibly the last reminder of the signal box's real function until its unfortunate removal. (I also recall, near to Wollongong University's University House slightly further north, and before its removal at the same time as Mt Keira 'Box, was Mt Pleasant Signal Box. It was well out of commission when I realised its significance, but was a useful marker to where the Mt Pleasant Tramway crossed the South Coast Line.)

Greg Oehm

Another reader also has recollection of growing up in Wollongong when track was still visible.

I was just reading your report on the Mt Keira tramway in the latest LR, when were you in Wollongong? I could have shown you where everything is, my parents still live in the house I grew up in Acacia Ave, one of the ones that backs on to the reserve. The high level bridge over Gilmore Creek near the end of Vickery St uses the original abutments from the tramway bridge with a new span and deck added in the 1970s. A friend and I drove his Mini over the bridge in about 1977 before they put the posts at either end.

The tramway ran on the southern edge of the Collies club car park which fronts Flinders Street, there used to be track still there as I can recall seeing it but never took a photo.

Chris Stratton

WRB (Bob) Johnson Diaries (LR244)

I was very pleased to read Stuart Thyer's report on the rediscovery of the diaries of the late WRB (Bob) Johnson in *Light Railways* 244. Not only does it identify a valuable resource, but it reminds us of the work of someone who, if it had not been for his tragically early death, would have been recognised as one of the great historians of Australian light railways.

I first became aware of the quality of Bob Johnson's work in the 1960s when John Buckland passed on to me notes and meticulously annotated photographs of a visit Bob had made to Tasmania in 1937. John also served on Bougainville in 1945 and I recall him telling me how distressed he had been to find Bob Johnson's grave in the war cemetery, as he had not known that Bob had been killed in action.

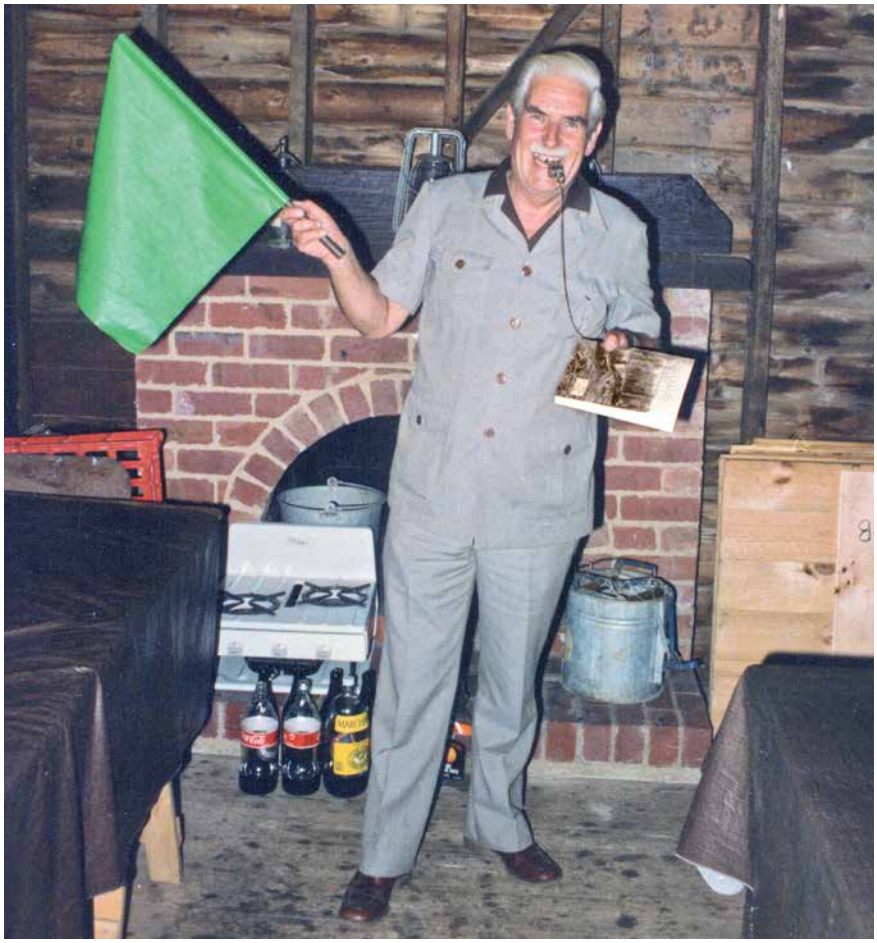
In more recent times I have been working with a small group of volunteers led by Bob Parker listing and describing the tens of thousands of photos left by John Buckland to the National Library in Canberra. I found 20 of Bob's 1937 photos among the Tasmanian photos and there will be others in the collections for other states.

Do we know what happened to Bob's photo collection after his death? If it did not survive it would be a very worthwhile project to compile a list of Johnson photos that have survived in other collections.

Jim Stokes,
Curtin, ACT

Reply from Stuart: "During the preparation of the article, a number of archives were approached for potential images. Both the ARHS in Victoria and NSW noted that they had very little in their collections. The NLA catalogue identifies 26 images attributed to Johnson among the John Buckland collection (plus Jim's extra 20 from Tasmania) and given their close friendship, it is possible that his collection ended up with John. An archivist with diaries in one hand and Buckland collection photos in the other may well be able to bring new light to many images."

The Gilmore's Creek bridge in 2014, discarded fishplates still lie in the creek bed below.
Photo: Stuart Thyer



VALE – NORM WADESON OAM

It is with much sadness that we learned about the passing of long time member Norm Wadeson on Tuesday 11 August 2015 at the age of 90. Norm had been a member of the LRRSA since 1966, had a lifelong interest in timber tramways, and was always very supportive of the Society's activities.

In January 1959, his article on the Tyers Valley Tramway was published in the *ARHS Bulletin*. It was the first time a Victorian timber tramway had had a serious history written about it, and it had an inspirational effect on others with similar interests. Norm collected much information and photographs relating to timber tramways which he readily made available to others.

In 1961 he became the Vice-president of the Puffing Billy Preservation Society and he played a critical role in getting the train running again. Subsequently he held many key roles in the PBPS and Emerald Tourist Railway Board, and his contribution to the Puffing Billy Railway was incalculable over a long period of time. Norm was awarded a richly deserved OAM for his services to the Puffing Billy Railway.

In the 1950s he worked for the Forests Commission Victoria as an Industrial Officer, and in the 1960s was the Secretary to the Commissioners. In this role he was able to keep watch on the welfare of the Climax locomotive at Erica. With Lon Wymond he was responsible for establishing the narrow gauge museum at Menzies Creek, and he organised the transfer of the Climax to the museum in 1965. At the time of his retirement, Norm was head of the computer data processing department of the Victorian State Treasury.

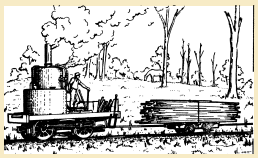
At Easter 1986, as part of the LRRSA's twenty-fifth anniversary celebrations, the Society ran a trip on Puffing Billy for a dinner at the Packing Shed. Due to a failure of NA locomotives it looked like the trip would have to be cancelled. At that time Norm was a member of the ETRB and he authorised the use of *Sir John Grice* and NRT1 to haul the train. At the Nobelius Packing Shed Norm officially "dispatched" (rather than "launched") the then new LRRSA book *Rocky Bluff to Denmark* at the dinner.

And in 1998 the LRRSA organised a seventieth birthday trip for the Climax locomotive on the Puffing Billy Railway. Again there were some issues relating to whether the train would run which Norm was able to resolve. He also gave the speech at the seventieth birthday lunch.

Norm had a very high level of wisdom and common sense, and as a result was widely respected. This was amply demonstrated at his standing-room only funeral, which was attended by hundreds of people.

He will be sorely missed by many.

Above: *Norm Wadeson 'dispatches' (rather than 'launches')* Rocky Bluff to Denmark *at the 'Great Packing Shed Affair', Nobelius Siding, March 1986. Photo: Lou Rae*



LRRSA NEWS

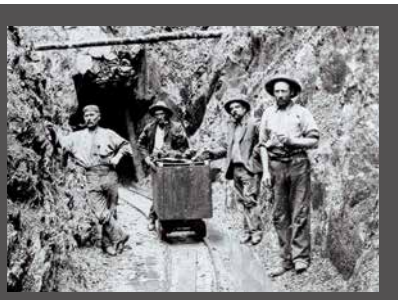
MEETINGS

ADELAIDE: "An archival pot-pourri"
Trevor Triplow will present an archival pot-pourri, including Adelaide trams. News of light rail matters will be welcome from any member.
Please contact Les Howard on 08 8278 3082 or lfhoward@tpg.com.au if you are planning on attending.
Location: 100 Sir James Hardy Way, Woodcroft
Date: Thursday 3 December 2015 at 7:30pm (There is no meeting in October)

BRISBANE: David Rollins presents…
David Rollins will be showing images of his latest overseas trip to the Czech Republic, Poland & Slovakia.
Location: BCC Library, 107 Orange Grove Road, Coopers Plains.
Date: Friday, 16 October at 7:30pm

MELBOURNE: Trains, trees, museums and a ghost town – part two of Bill Hanks' recent gallivant of the USA West Coast"
Bill Hanks continues sharing highlights of his recent trip to the U.S. One thing America does very well is the high standard of restorations for their museums.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday 8 October at 8:00pm

SYDNEY: "The refurbishment and other new improvements at the Katoomba Scenic Railway – Scenic World – Katoomba, NSW"
NOTE TEMPORARY CHANGE OF VENUE
Mr Philip Hammond, proprietor of Scenic World, which includes the Scenic Railway at Katoomba will be giving the meeting a detailed overview of the recent refurbishment and also of new historical research findings to do with the incline railway's coal mining transport history. His daughter Anthea, who is a mechanical engineer by profession, was the Project Manager appointed for the refurbishment and she will be also giving a presentation of the technical details involved with the work.
Temporary new location at Burwood: George Street Centre, Cnr George St and Elsie St, Burwood. Located about 150 metres north of Burwood railway station, off Burwood Rd. There is a parking station available (pay) or street parking.
Date: Wednesday 28 October at 7:30pm



Field Reports

Please send any contributions, large or small, to fieldreports@lrrsa.org.au or to P.O. Box 21, Surrey Hills, Vic 3127.

Robbie's Sawmill, 'S' Creek Sawmill and associated tramways, Black Range, Victoria Gauge 914mm

Readers may remember that the LRRSA undertook a heritage survey following the Black Saturday bushfires of 7 February 2009 (Heritage Victoria Project 3544). The field report that follows is from a portion of that survey.

What became known as 'Robbie's mill' was built by Norm Padgett in mid-1934 on what was to become known as Robbies Creek at Narbethong. Bullocks were used to snig logs to a tramway laid in a westerly direction from the mill. By late 1938 this tramway was one and a half miles long, and the bullock teams had been discarded in favour of two steam logging winches. Sawn timber was despatched to Healesville by motor truck. The sawmill and ten mill dwellings were destroyed in the January 1939 bushfire. The mill and dwellings were rebuilt, but the mill was sold shortly afterwards to 'Robbie' Robinson who had an interest in the Erica Hardwood Company mill located on 'S' Creek on the north side of the Black Range. Robinson was able to combine logging on both areas, and a crawler tractor was obtained to haul logs in to an extended tramway network. Since the 'S' Creek mill's export tramway down to the Murrindindi River and on to Cheviot railway station had been destroyed in the January 1939 fire, the mill's logging tramway was extended later that same year (at a cost of £1700) over the ridge and down Robbies Creek to meet up with the Robbie's mill logging tramway, enabling the dispatch of the 'S' Creek timber via Robbie's mill and onwards to Healesville by motor truck. The connecting tramway was worked by horses. Jack Ryan used a team of eleven horses to haul each load of timber from the 'S' Creek mill up the steep tramway to the top of the ridge. Once two loads were at the top of the ridge, the trucks were coupled together and taken down to Robbie's mill on the bogie brakes while the horse team followed behind. The horses were stabled at Robbie's mill until it was time to bring the next two loads across the range.

In 1943 the 'S' Creek mill was closed and sold, and the surplus equipment used to build a case mill alongside the existing Robbie's mill. The log tramways continued in use until around 1946 when road cartage of logs took over. Robbie's mill was sold to J. L. Gould in December 1958. Gould retained the mill as an operating concern but, by 1960, the mill had completed twenty years cutting since the 1939 bushfires and required major repairs. Its isolation meant that labour was hard to retain when most mills were already in townships. By January 1961, operations at Robbie's mill had ceased, the plant was removed to Marysville, and the Robbies Creek site was abandoned.[1]

Robbie's Mill was surveyed by Peter Evans in May 1993 as part of the Regional Forest Agreement process (see site plan). The site was intensely burnt on 7 February 2009, and almost all remnant timbers and structures were destroyed. (A boiler near the site has been removed by persons unknown sometime after the 1993 survey; the high price of scrap metal and the presence of unsupervised logging

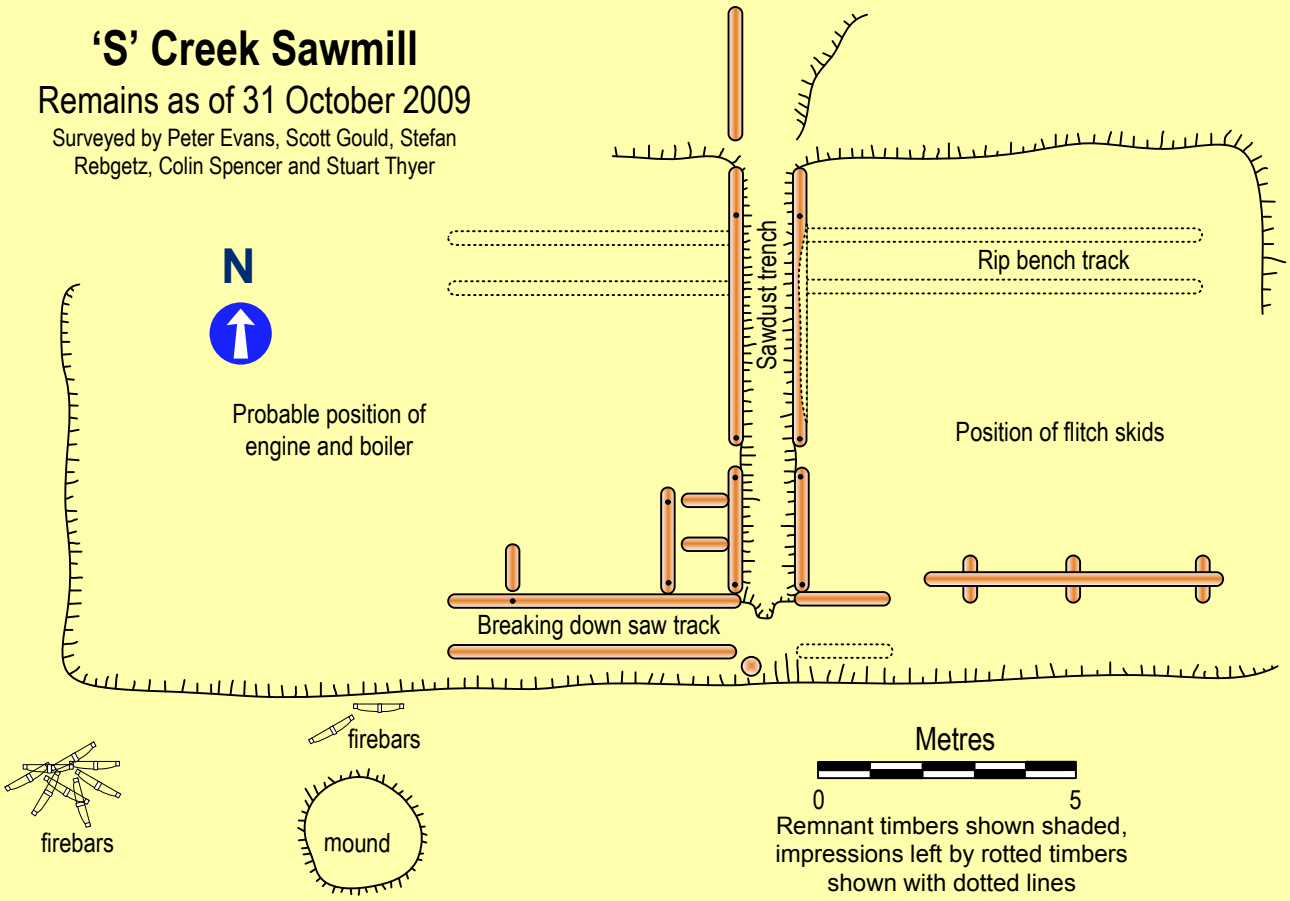
A load of timber heading away from the S Creek Mill in 1937. At this stage the outlet tramway still followed 'S' Creek downstream to start its long journey over the Murrindindi tramway to Cheviot railway station *Photo: Lindsay McLure*

Padgett's / Robbie's mill after the 1939 bushfire. The mill boiler is to the left and, just to its right (partially obscured by sheets of corrugated iron), is the Tangye engine powering the mill. The mill's sawdust burner (an old boiler standing upright) is in the right foreground. *Photo: PROV*

‘S’ Creek Sawmill

Remains as of 31 October 2009

Surveyed by Peter Evans, Scott Gould, Stefan Rebgetz, Colin Spencer and Stuart Thyer

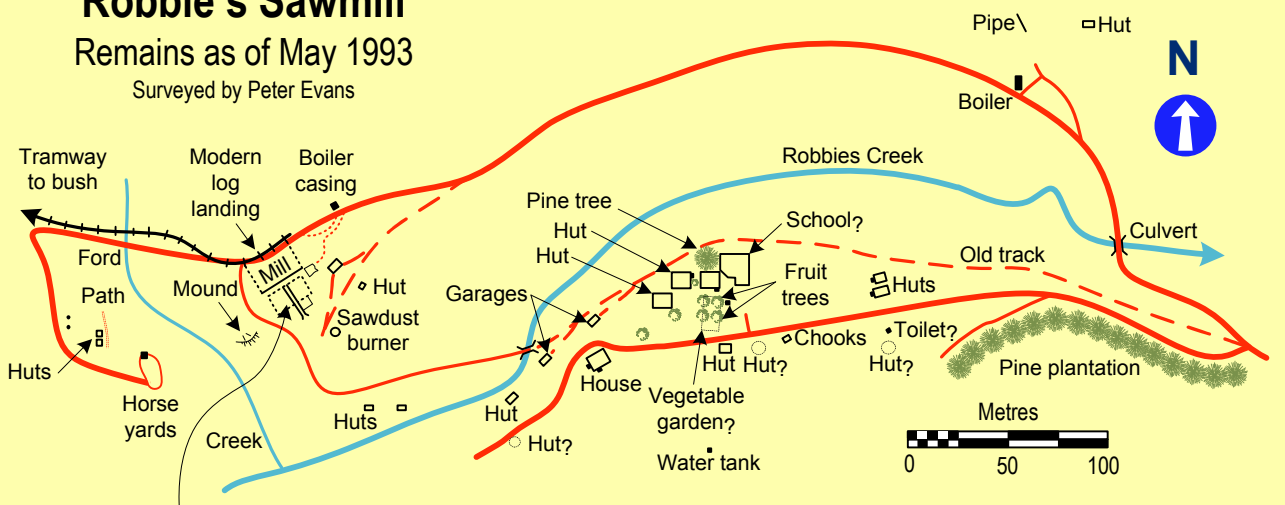


PE August 2015

Robbie’s Sawmill

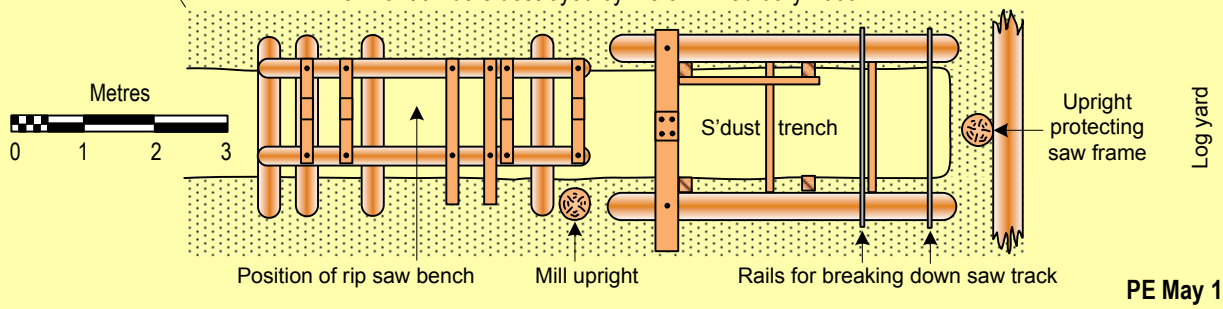
Remains as of May 1993

Surveyed by Peter Evans



Plan of main sawbench foundations, Robbie’s mill

All remnant timbers destroyed by fire on 7 February 2009



PE May 1993

contractors probably providing the motive and the mechanism). However, the site still features many iron artefacts and stone chimney mounds (reminiscent of similar mill sites burnt in 1939). Although the 2009 fire has reduced the amount of visible evidence of occupation, there are still considerable surface and sub-surface remains to tell the story of the site. Since the site had been well-mapped and described in 1993, the 2009 survey concentrated on mapping the tramway system connecting Robbie's mill with the 'S' Creek mill on the far side of the range. (Contemporary mapping of the tramway system was done in 1936 under the supervision of Forest Assessor Bjarne Dahl, and hence missed any tramways constructed after this date). Therefore the only evidence of the route would be found on the ground.

The survey of the connecting tramway (see map) commenced on 25 April 2009 from the Black Range Road, with the aim of picking up the tramway in the headwaters of Robbies Creek and following it downhill to Robbie's Mill. The survey party consisted of Peter Evans, Scott Gould, Stefan Rebgetz, Colin Spencer and Stuart Thyer. The tramway was quickly located and followed down the western side of Robbies Creek. Several low crib-log bridges were encountered along this section. Rail was mostly wooden with continuous packing for horse-haulage, although a number of lengths of 30lb/yd iron rail were noted in the vicinity of bridges. The tramway was very steep, and lengths of wire rope lying along the formation and rope scars in adjacent rocks hint that cable haulage may have been tried at some point, although oral history evidence suggests that the tramway was worked only by horses. After swinging to the east the tramway crossed to the northern side of Robbies Creek just above a small waterfall, which was dubbed by the survey party 'Heritage Victoria Falls'. Here a tramway junction leading to the south was noted (but not followed at this time). Just west of this point was a fairly flat area above the tramway formation with evidence of work activity: a saw blade, fire bars etc.

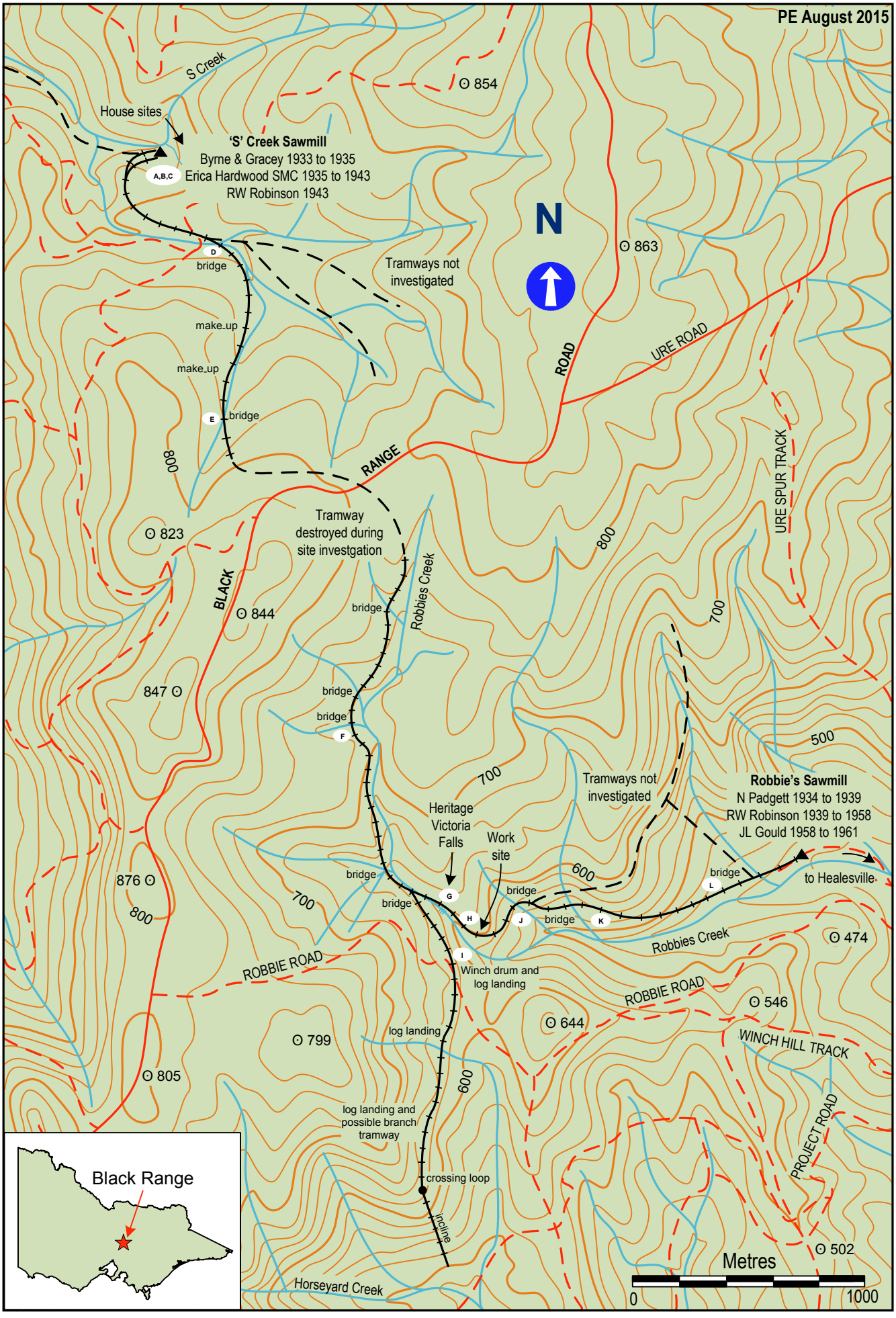
Past this point the connecting tramway plunged steeply down the precipitous northern bank of Robbies Creek. The formation had been blasted out of the hillside and was clearly an engineering feat of some significance. Wrecked bogie wheelsets lying below the tramway formation attest to the difficulty of working this section. Two crib-log bridges were met before the tramway levelled out as it neared the mill. Well-outside the mill itself was found the engine which had been used to power the mill prior to 1939 (the engine is visible in photographs of the burnt mill). It is a Tangye patent 'girder-frame' engine, 'H' size (11in bore and 22in stroke) with half-trunk guides, and is of the type introduced in 1869 that won a gold medal at the Paris exhibition in 1878. It was designed for a boiler pressure of 100psi and to run governed at 110rpm. Unfortunately, it has long ago been all-but destroyed by the scrap metal merchants.

A: *The foundations of the breaking-down bench at the 'S' Creek sawmill. From left to right (resplendent in the LRRSA 2009 post-fire survey hi-vis vests), Scott Gould, Stuart Thyer and Stefan Rebgetz. Photo: Peter Evans*

B: *Abandoned wheelsets above the sawdust heap at the 'S' Creek mill. Photo: Peter Evans*

C: *Scott Gould examines the foundations of the crawler-tractor servicing shed at the 'S' Creek mill. Note the worn and abandoned track rollers on the right of frame. Photo: Peter Evans*

Note: The letter beginning each caption corresponds with the position where the photograph was taken, marked on the map opposite,



A return was made by the same party to map the tramway north of the Black Range road on 31 October 2009. In the intervening period the ridge-top had unfortunately been logged, destroying an important section of the tramway. The tramway was picked up in the headwaters of a tributary of 'S' Creek and followed downstream. Like the tramway on the southern side of the ridge, it was wooden railed with continuous packing for horse haulage. Two crib-log bridges were met with in this section. The tramway crossed to the northern side of the creek on the second of these bridges, and then dropped steeply down a ridge to the 'S' Creek mill.

The 'S' Creek mill site features a reasonably complete set of mill-foundation earthworks including some remnant timbers (see site plan).

D: *Stefan Rebgetz ponders a tramway bridge over an un-named creek just south-east of the 'S Creek mill. The bridge in the distance is on a logging road.* *Photo: Peter Evans*

E: *Scott Gould examines the remains of a bridge just north of the Black Range Road.* *Photo: Peter Evans*

F: *Remains of a tramway bridge over a side creek in the upper reaches of Robbies Creek* *Photo: Stefan Rebgetz*

G: *'Heritage Victoria Falls'. The main tramway (on which the photographer is standing) crossed Robbies Creek just above the falls. The branch tramway leading south to the incline down into Horseyard Creek is on the opposite side of Robbies Creek and a little higher up.* *Photo: Peter Evans*

H: *Wooden packing and a surviving rail just south-east of Heritage Victoria Falls.* *Photo: Peter Evans*

Associated with the site are a large sawdust heap and 18 sets of 914mm gauge tramway wheels in various states of disrepair. East of the mill are at least seven dwelling sites marked by stone chimney mounds and, in one instance, a cast-iron stove. Evidence of garden beds was revealed by neatly-placed lines of stones. In this vicinity is a fire refuge dugout, with an entrance supported by old tram rails and discarded boiler tube, and lined with corrugated iron. Of special interest is a crawler-tractor servicing shed, with remnant timber foundations and discarded track rollers and springs.

The outlet tramway from the lower side of the mill originally followed 'S' Creek downstream. (This tramway was not investigated during this survey). It was clear that another tramway from the lower side of the mill had been constructed uphill to meet with what had originally been a logging tramway to enable the transport of sawn timber to Robbie's mill.

A return to Heritage Victoria Falls was made on 5 November 2009 by Scott Gould and Colin Spencer to map the branch tramway heading south from this point. The grade on this tramway was almost level. Not far south of the Falls was a winch drum adjacent to a loading ramp. It is not clear if the winch drum was in situ or has been bulldozed to this position; in any case, it cannot have been moved far. (It is likely that this artefact has given the name to Winch Hill Track). The tramway continued south from this point past two loading ramps and winch emplacements, and terminated at the site of a lowering gear and incline leading down into the valley of Horseyard Creek. Dog spikes and fishplates suggest that at least part of the tramway was steel-railed, and close-packing suggests that it was worked by horses. The foot of the incline has been disturbed by later logging. By this time the forest regrowth had reached a point where further examination of tramways in the area had become impossible due both to the increasing forest regeneration and danger from falling tree limbs.

Peter Evans 08/2015

References:

1. Mill and tramway histories condensed from Evans, P. (in prep). *Wooden Rails and Green Gold: A Century of Timber and Transport over the Yarra Track.*

Note: Section 127(1) of the Victorian Heritage Act 1995 provides that a person must not knowingly or negligently deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger an archaeological relic except in accordance with a consent issued under section 129. Penalty: In the case of a natural person: 600 penalty units or imprisonment for 12 months or both. In the case of a body corporate: 1200 penalty units.

Errata

References 2, 3 and 5 at the foot of page 31 of LR244 should read PRO, VPRS 11563/P1 not VPRS 1153/P1. Apologies for this error, which was caused firstly by a faulty computer keyboard and secondly by insufficiently-detailed proof reading by your field reports editor.

Above left: **I:** *Logging-winch drum adjacent to Robbies Road on the tramway south towards Horseyard Creek. Photo: Scott Gould*

Left: **J***: Bridge over a creek on the very steep section of tramway below Heritage Victoria Falls. Most of the tramway formation has had to be blasted out of the hillside. By the time the survey party had reached this point it was raining heavily and most were soaked to the skin! Photo: Stefan Rebgetz.*

Above: **K:** *From the opposite side of the valley the steep grade and extent of excavation required to construct the tramway high above Robbies Creek is evident. Photo: Peter Evans*

Below: **L:** *The remains of the engine that once powered Robbie's Mill. Photo: Peter Evans*

RESEARCH

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Breakwater Railways (NSW)

In the early days of European settlement, NSW had few natural harbours and the entrances to nearly all of its coastal rivers were obstructed by off-shore sand bars and shallow shifting channels. Coastal shipping links were vital for trade and transport, but many ships were wrecked and lives lost while attempting the passage of these hazardous river mouths.

To improve conditions for shipping, the NSW Government constructed breakwaters and training walls at many river entrances during the late 1800s and early 1900s. Later on, breakwaters were also built to create artificial harbours such as Coffs Harbour and Port Kembla. Contractors working under the supervision of the NSW Department of Public Works carried out most of the early works, but increasingly from the mid-1890s onwards the Public Works Department employed day labour to do the work itself.

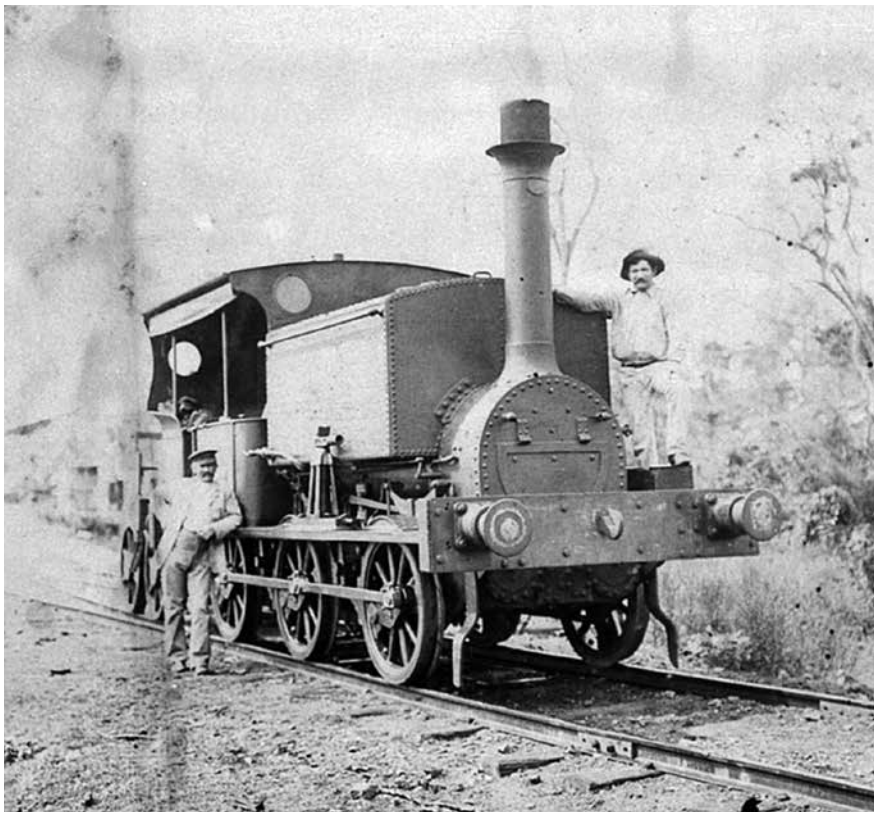
Breakwaters were constructed *á pierres perdue* (literally 'lost stones') by tipping large irregularly-shaped blocks of rough quarried rock into the sea to form strong self-interlocking rubble walls. The use of heavy concrete blocks was a later innovation.

Transporting rock from quarries to breakwater construction sites almost always involved some form of rail transport. Short railways linked quarries directly to breakwaters in cases where suitable rock was found close by. Rock supplied from more distant quarries – preferably located close to a navigable waterway – was usually railed to the water's edge, loaded onto punts and towed by small steam tugs to construction sites.

Rails were laid on top of most breakwaters and training walls. Rocks were transported to the advancing tip faces on side-tipping and end-tipping four-wheel rail trucks. Motive power was provided initially by horses and latterly by small steam locomotives. Most, if not all, breakwater railways were standard-gauge (1435mm).

Compared with timber tramways, little work has been done on NSW breakwater railways to date. This is a fertile field for light railways researchers looking for an interesting topic. The following lists the major NSW breakwater complexes so far identified. The main construction periods and *published or ongoing research* are indicated, where known.

1. Tweed River Entrance (Tweed Heads): Pre-1892 – 1904
2. Richmond River Entrance (Ballina): 1890 – 1912
3. Clarence River Entrance (Yamba / Iluka): 1862 – 1903 and 1952 – 1971; Ian McNeil ongoing 2015
4. Coffs Harbour: 1912 – 1941: *John Kramer – LR 86*
5. Bellinger River Entrance (Urunga): 1890 – 1906
6. Nambucca River Entrance (Nambucca Heads): 1896 – 1903
7. Macleay River Entrance (South West Rocks): 1896 – 1906
8. Trial Bay Harbour of Refuge (South West Rocks): 1890 – 1903
9. Hastings River Entrance (Port Macquarie): 1897 – 1901
10. Camden Haven River Entrance (Laurieton): 1898 – 1903
11. Manning River Entrance (Harrington): 1894 – 1904; 1919 – 1927; *Ian McNeil, LR 119, 120*
12. Cape Hawke Harbour (Tuncurry – Forster): 1899 – 1901; *CC Singleton ARHS Bulletin 98*
13. Newcastle Harbour (Hunter River Entrance): 1850s – 1915
14. Lake Macquarie Entrance (Swansea) 1889 – 1896; *"Wanderer" (aka C.B. Thomas) ARHS Bulletins 154, 156*
15. Port Kembla Harbour: 1898 – 1960; *GH Eardley ARHS Bulletin 131-133; CC Singleton ARHS Bulletin 141, 143; Stuart Thyer – ongoing 2015*
16. Shoalhaven River Entrance: 1901 – 1903?
17. Moruya River Entrance (Moruya): 1860 – 1954 (intermittent), *Jim Longworth: LR 133; LR 142; Bob McKillop: LR 142*



Having previously seen service on the Box Vale Colliery line near Mittagong NSW, Manning Wardle No 89 of 1889 was purchased to assist with the Macleay River breakwater works, downstream from Kempsey, in 1897. *Photo: Macleay River Historical Society*

Useful sources of information for researchers include:

1. *Between Wind & Water: a History of the Ports and Coastal waterways of New South Wales*, Lenore Coltheart, Sydney 1997, ISBN0868065986, is a good introduction to, and overview of, the history of the NSW Dept of Public Works and its work on the NSW coast.
2. NSW Dept of Public Works Annual Reports 1888+ are available for download from www.opengov.nsw.gov.au
3. Historic NSW PWD survey plans are held by the Plan Services section of the NSW Dept of Finance and Services (PlanServices@finance.nsw.gov.au). They offer an on-line digital ordering service, a bit expensive but there are some gems. See LR241 p35 for details.
4. NSW Acts of Parliament were enacted to authorise and finance major schemes, and can be found on-line.
5. The NSW Parliamentary Standing Committee on Public Works examined proposals for major projects from 1889 onwards. Its reports and minutes of evidence are excellent source material. Some are available online.

6. On-line access to NSW Parish and Historical Maps is available at www.lpi.nsw.gov.au/mapping_and_imagery/. Some of these show good railway detail.
7. Local historical societies often have good photographic collections of their particular rivers and ports.

The Research Editor and myself would be very happy to give advice and assistance to new researchers interested in taking on a breakwater project. There are no deadlines or expectations to be met, but much to be discovered and fun to be had along the way.
Ian McNeil

Referencing Archives
At the end of the referencing article in LR241, I promised to go into more detail on referencing material found in National or State archives. As a researcher looking to construct references for all your hard found material, the best source of information is invariably on that archive's website, some even provide the citation 'ready to go'. If you are new to archiving though and want to work out what many of the terms mean, read on.

An archive reference could look like this example, published in LR 243, accompanying Bridget Jolley's Monorail article. The reference is 'NAA:B300, 6767 Part 1c'. Just what does this cryptic line of text mean?

The first part is the 'Archives Institution' holding the item. This one is the National Archives of Australia (NAA), but could also be the relevant State Archives/Records Office, such as State Records New South Wales (SRNSW) or the Public Record Office Victoria (PROV).

The next bit is (optionally) the 'Agency', which is the Government department, or organisation, that created the archived material. In the above reference, Bridget has not listed the agency.

Then comes the 'Series' or 'Records' number. A series is a group of similar records usually kept together because they result from the same activity. The series listed by Bridget (B300) is a correspondence file of the Commonwealth Railways.

Some archives (e.g. PROV) then list a 'Unit'. This is a physical storage object, such as a box, volume or plan press drawer. The NAA does not use units.

Within a series will be the 'Item', also called 'Control symbol'. These numbers are the identifiers of individual files, volumes, maps etc that make up the series. '6767 Part 1c' is titled "Mono - Rail propositions and guideways - transport system", which was found by entering the series and item numbers into the NAA search engine.

Bridget's reference is known as an 'abbreviated citation', and is the bare minimum to enable a record to be located. An 'expanded citation' gives all detail of the item. An expansion of Bridget's reference would read as 'National Archives of Australia: Engineer-in-Chief and from April 1915, Acting Commissioner, Commonwealth Railways; B300, Correspondence files, single number series and drawings, 01 Jan 1913 - 31 Dec 1983; 6767 PART 1 C, Mono - Rail propositions and guideways - transport system, 1912 – 1973'.

At times, you might also come across 'Folio' and 'Volume'. These terms are used in relation to land titles. Sometimes 'Consignments' are noted, these refer to a group of items within a series that were deposited with the archives institution at a particular time.

Over the years, methods for referencing archives have varied. Some records may have been held by a Government department (agency) at the time the researcher was active, thus the reference might commence with the agency name, typically abbreviated. An older record that has subsequently been archived, and whose reference does not conform to the modern standard, can still be searched with a little work. Often entering the relevant reference number, even if you're not sure if it is a series or item number, will yield the correct answer, these numbers do not usually change when the records are transferred to the archive.

For further information
National Archives of Australia, http://www.naa.gov.au/collection/fact-sheets/fs07.aspx
Public Record Office Victoria, http://www.access.prov.vic.gov.au/public/PROVguides/PROVguide013/PROVguide013.pdf
State Records NSW, http://www.records.nsw.gov.au/state-archives/guides-and-finding-aids/archives-in-brief/archives-in-brief-10
Stuart Thyer

Trove updates
In late 2014, there was a flurry to digitise newspapers from the WWI era, no doubt assisted by funds supporting commemoration of the 100th anniversary of Gallipoli. This year sees a more general spread of papers across all States and Territories. Of particular interest is that a great number of Blue Mountains area newspapers have been digitized. A full list can be obtained here http://trove.nla.gov.au/forum/showthread.php?2073-Trove-s-latest-newspapers

If you've been using Trove for some time or are a first time user, have a look at the Finding things webpage. It has a range of lessons on using Trove from beginners stepping out for the first time to advanced users looking to make more from their searches.
http://help.nla.gov.au/trove/using-trove/finding-things

Trove is both a fascinating and a frustrating resource. The somewhat hit-and-miss electronic text recognition facility tests one's ingenuity to the limit. Ian McNeil notes that there must be at least a dozen ways to miss-spell "tramway," and that's not including the original writer's decision to use alternatives like 'tram,' 'rail,' 'line,' etc, which yield up even more opportunities for creative miss-spelling.

When researching for an article, Ian has learned (the hard way) to repeat Trove searches multiple times using as many different key words you can think of. Some very good light rail finds have been the result of the most unlikely key.

Hot Trove Tip

To manage some of the scenario described above, use 'wildcard' searching. You can use the wildcard symbol * in the simple search box to broaden your queries.
For example, to find "tramway", "tramline" or "trams", type in "tram*". Look for the 'power searching' link on the 'finding things' page.

Victorian Places website (Vic)
The State Library of Victoria (SLV) has launched a new website called 'Victorian Places'. It lists every town and suburb in Victoria and provides a history for each place with, photos, maps, excerpts from newspapers and current demographic information. It's similar to the Australian Dictionary of Biography (ADB) for towns and suburbs. It will certainly come in handy in the heritage sector and for researchers working on place based projects. The Library has taken a leadership role in this website in partnership with Monash University and the University of Queensland. www.victorian-places.com.au
Source: RHSV Email – 25 June 2015

Heritage & Tourist NEWS

News items should be sent to heritagetourist@lrrsa.org.au Digital photographs for possible inclusion should be sent direct to Scott Gould at editor@lrrsa.org.au including the name of the location, the name of the photographer and the date of the photograph.

QUEENSLAND

WOODFORD RAILWAY, Woodford

610mm gauge

The Railway has received a grant towards the erection of a locomotive running shed. This will be placed over three of the existing storage tracks next to the picnic area. To allow the earthworks to be undertaken and the shed erected, this area has to be cleared of rail vehicles and the existing track removed to be replaced after the shed is finished. This is a big task in itself, however there is an added complication; there is no track on which to store the rail vehicles currently in that area. This can be overcome by extending one of sidings into the compound. This will be about 80m long and fortunately there are enough concrete sleepers from Ingham and 42lb/yd rail from Nambour to allow this track to be laid. Construction of the loco shed will mean a delay in the work on the new track at the Peterson Road end.

Work on the Perry Steam Locomotive (Perry 0-6-2T 5643/51/1 of 1951) has been slow but things are going on behind the scenes. When the regulator body (in the steam dome) was removed from the boiler, the casting was found to be badly corroded and had been patched previously. A brand new casting was found to be available and the decision was made to purchase it. It is presently being machined and finished off ready for installation which should happen soon. When the oil firing equipment was removed from the firebox, a leaking boiler stay was discovered. The boiler inspector has advised that this needs replacing. Arrangements are being made to have this work undertaken in the near future. The trailing truck wheelset was found to have faults where previous attempts to weld it had not been successful. The wheelset from stored Perry loco *RD Rex* (Perry 0-4-2T 7650-49-1 of 1949) on site is being removed to replace it. The firebox doors will also be borrowed from *RD Rex*.

The boiler and side tanks need washing out but this cannot be done until the loco can be moved out of the workshop.

The work on Melbourne (Hudswell-Clarke 0-6-0 1701 of 1938) is progressing with most work on the frame now completed (excluding the side rods/valve gear) and work is also starting on the boiler. During the last month, more than $10,000 was spent purchasing new boiler tubes for Melbourne and Bundy (Bundaberg Fowler 0-6-2T 5 of 1952). These will be moved to the site soon.

Durundur Railway Bulletin 7&8/15

FRIENDS OF ARCHER PARK STATION AND STEAM TRAM MUSEUM INC., Rockhampton

1067mm gauge

The departure signal arm damaged by Cyclone Marcia has been replaced with the aid of a cherry picker. Stage and Audio branch have commenced installing the speakers for the new sound system and these are sounding great. The remainder of the soundscape will be completed when staff return from holiday.

Carpet and colours for the upholstery and wood stain for the upgrade of carriages have been chosen. Work commenced in July 2015 with removing the seats and carpet from the carriages. A carpenter was then hired to prepare the floors for the carpet.

Queensland Rail has donated the Main Control Panel from Rockhampton Cabin A. This was the main Control Panel that ran traffic in Rockhampton for many years. QR was keen to keep this item in Rockhampton and The Friends group was quick to accept the donation. It will eventually be refurbished and a suitable framework constructed for it to sit on. Meanwhile, it is possible it will sit on the platform on the southern end of the old signal box – to have heritage and modern close together.

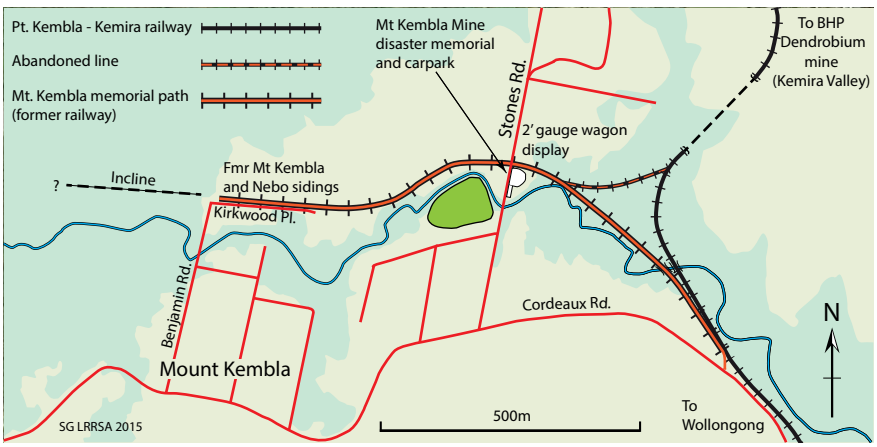
Janie Seymour, *Tram Tracks* Volume 9 Number 4, 8/15

NEW SOUTH WALES

Mt Kembla Mine Memorial Pathway, Mt Kembla

The Mt Kembla Mine Memorial Pathway is a 1km long sealed walking track along a disused section of the Port Kembla to Mt Kembla railway. The line once served the Mt Kembla and Nebo coal loaders, and was also used until the mid 1990s to allow trains to access the Kemira Valley. With the closing of Nebo colliery in 1993, the line was diverted to directly access the Kemira Valley, doing away with the need to run around the train on both empty and loaded journeys. Although it appears that was a triangle connection of the lines, they were never connected as such. There is an entry structure adjacent to 200 Cordeaux Road, which gives access to the shared pathway, however there is better (safer!) parking adjacent to interpretative installations and a formal memorial to the Mt Kembla mining disaster at Stones Road.

Scott Gould, Brad Peadon, Stuart Thyer



VICTORIA

WALHALLA GOLDFIELDS RAILWAY, Walhalla

762mm gauge

In late June WGR took delivery of 'as new' bus seats, donated by two members who operate a bus company. These seats will be stored for the moment and it is hoped they will be used in a planned future railmotor. The aim is to run seven days per week and a railmotor will be required to enable this and for the Railway to apply for larger Government grants to extend the line towards Erica. The railmotor will be designed and purpose built, some members suggesting that it will be like a narrow gauge Walker railmotor of the kind that served on many country lines in Victoria.

Dogspikes and Diesel 7/15

PUFFING BILLY RAILWAY, Belgrave

762mm gauge

The second restored engine unit of NG/G16-129 (Beyer-Peacock, 7430 of 1951), has been delivered to Belgrave. Both engine units and the new boiler are in the workshop where restoration work is continuing. Space in the workshop is now at a premium and will have a negative impact on the rate of future progress on the restoration. Management is examining a number of options in an endeavour to speed restoration of the locomotive.

The ETRB has approved funds to convert additional "Gator" units to trolleys with some modifications based on the performance of the prototype. New units will have re-engineered hubs, a hand brake, and a "strut" installed to ensure the rail wheels cannot ride up on rails in the event of a hydraulic leak.

On Sunday 2 August 2015, the Railway marked the 50th anniversary of Puffing Billy's return to Emerald by recreating that first train for invited guests. On arrival at Emerald of a special train carrying the guests, lunch was served and the group hosted the launch of the new book, *Saving Puffing Billy (Vol. 1)*. This book, richly illustrated and sprinkled with anecdotes and reminiscences of those who were there at the time, tells the story of the first 10 years of the life of the Puffing Billy Preservation Society.

At an information evening on July 7, the perennial question about 3A (VR Newport workshops/ Baldwin, 2-6-2T, 1900) surfaced. John Robinson (CEO of the ETRB) replied that the Board policy was pragmatic; they couldn't do everything and would do what was practical. Locomotive policy will be reviewed once NGG16 129 is complete. However, there is no doubt, he said clearly, that in the future the Railway will need another NA; it may be 3A or it may be a new build. If the Railway needs 10 of them, a way will be found to build them. Whichever way it goes, unlike the South African Garratts, there are no spare parts for the Na's. This means the build will have to be done from scratch and will cost in the order of three to four million dollars per loco.

Monthly News 7/15 and Information Evening 7/15

VECTIS LIGHT RAILWAY, Wimmera District

610 mm gauge

First reported in LRN 120, December 1997, this private railway was being established at Quantong, west of Horsham. Included in the original report were the following items of rollingstock: two cane trucks and a bogie mower chassis from Condong Sugar Mill in NSW, one tipper wagon, presumably used on a Wimmera salt operation, and a collection of construction wagons which were obtained from a farm at Gowanfield in the Victorian Mallee.

Research Editor Stuart inspects a skip / table on the Mt Kembla Memorial Path.

The Mt Kembla Memorial Path features a section of sleepers left in place to remind walkers of its past history. Both photos: Scott Gould

However, 18 years later, the material is being disposed at a clearing sale to be held Monday, 9 November 2015 at 11am.

Items listed are: Ex Marian Mill Motor Rail Simplex 4wDM 21512 of 1955, Furphy tank on rail wheels; all metal for hand-pump trolley; 4 truck bases on wheels; light trailer on rail 5ft x 8ft, no drawgear; lightweight platform on rail 5ft 6in x 10ft ; 2 bogies; very heavy rail vehicle underframe 4ft 6in x 14ft 6in; frames, wheels & boxes for 10 older 4 wheel bases; qty light rail track; rail for 2 sets of points; parts & fittings for 2ft gauge items; sleepers suit 2ft gauge; 3 signal/ points levers; axle box felt; host of sundries.

Full details can be obtained from the owners Alan & Val Finch Phone 0418 840 206 A/H, or email valrie1@bigpond.com

Agents in Conjunction: Elders Horsham Ph: 03 5382 8800 and Bill Ower Real Estate Ph 0428 504 395

Bill Ower, LRN 120

WESTERN AUSTRALIA

BENNETT BROOK RAILWAY, Whiteman Park

610mm gauge

A new water storage facility has been built next to the locomotive shed. This has involved site clean-up, concrete pads, and relocating of three existing 1000 litre water tanks. Two more were purchased from Westate Mining supplies but when its representative delivered them and saw the work the Railway does, he donated two more. This means the Railway can now collect 7000 litres of water.

Since June, the signals department has re-fitted the wigwag and installed an updated control circuit including conversion to 24 volt working to improve reliability. At the same time the opportunity was taken to re-paint the mast.

The work-for-the-dole group is undertaking re-furbishment of the passive level crossing signs around the Bushland Loop as suggested by the Office of Rail Safety on its April visit.

Work has continued on the Whiteman Village Junction North signals project. At the time of writing the WVJ North Outer Home and Advance Starter signal electrical connections have been completed, including digging in 10 metres of conduit. The associated track circuits have been wired including the insulation of 25 steel sleepers. To complete this phase, the track circuits require bonding and final adjustments made to the signal mechanisms. The next part of the project is the installation of the platform north of 3 road points, an additional relay cabinet at WVJ and wiring to all remaining signals. In the meantime, the fabrication shop is undertaking manufacture of the point motor components required to connect the point motors to No.2 and No.3 road points north of WVJ.

Work is continuing on Zamia station but the platform is still not in use. There is still work to do including the painting of the yellow safety line and completion of the fence. When the Park is happy work has been completed, it will arrange a technical committee to inspect the platform for compliance. Only when this process has been completed and approval has been given will the station be open for use.

Perry Engineering 0-4-2T (8967.39.1 of 1939) Betty Thompson *on the Bushland Loop North to Kangaroo Flats Station, Whiteman Park, Perth. Photo: James Waterhouse*

Fowler 0-6-0DM (4110019 of 1950) Rosalie *on the Bushland Loop South en route to Whiteman Village Junction, Whiteman Park, Perth. Photo James Waterhouse*

In the last 12 months approximately 250 timber sleepers have been replaced on the mainline between Mussel Pool and Kangaroo Flats. In this section there still remains 50/60 sleepers to replace. Most timber sleepers have been replaced with steel sleepers. Over 50 sleepers have been replaced in the Mussel Pool depot yard as well as extensive reballasting and packing.

The Dorman Planet 2 4wDM (3966 of 1962) is hopefully only temporarily out of use following an in service electrical failure that is currently being investigated. The Fowler 0-6-0DM is still the backup locomotive and volunteers are trying to limit its mileage to prolong the time before it needs to get its wheels re-profiled. The Atlantic Planet 1 (0-4-0DM 2150 of 1939) is slowly being phased into service while its motor is running in. It will be limited to weekend service as the loadings are higher and better suited to the Detroit engine. It is critical this locomotive is not left idling to avoid glazing the cylinder bores and causing the excess smoke and high oil consumption encountered previously. The Gemco (4wDM 1964) is still out of commission while volunteers investigate a new drivetrain as it has become uneconomical to repair and use the existing "Funky" drive. It still performs a valuable function on Ashley days helping the Fowler keep the vacuum brakes operating.

Volunteers are working with the committee to assess the viability of the next steam locomotive to bring into service and hopefully should see some progress soon. BT1 *Betty Thompson*, (0-4-2 T Perry 8967.39.1 of 1939) could operate, with only crew availability limiting its use.

At the Ashley Day on Sunday 24 May, the railway successfully launched *All Aboard*, written by Peter Gould, the first book in the Stories From The Engine Shed series. A large number of books were sold, and many people expressed an interest in purchasing future releases. Whilst *All Aboard* introduces the characters and setting for the series, future stories will feature the adventures of Ashley and his railway mates. The next story in the series is called *Ashley And The Pot Of Gold At The End Of The Rainbow* and it is hoped to release it at the Ashley Day in September.

Bennett Brook Railway Newsletter 8/15

KALGOORLIE LOOPLINE RAILWAY, Kalgoorlie

1067mm gauge

Kalgoorlie Consolidated Gold Mines (KCGM) holds the key to the establishment of a tourist line to the Super Pit lookout with Golden Mile Loopline Railway Society Chairman, Tony Crook, adamant that the first railway spike is only months away.

The Society's bid to re-establish one of the oldest lines in Australia via a tourist railway gathered steam with last weeks $3.7 million funding windfall under the Royalty for Regions program.

Brookfield Rail has already supplied 5km of track and about 4500 timber sleepers, worth about $2.5 million to develop the line to the Super Pit lookout.

Mr. Crook said work on the track would start within two to three months, while KCGM is to start major earthworks at the lookout with construction of a ramp.

"We can get started on the line almost straight away", he said. "The most time consuming thing will be the ramp and we will be working closely with KCGM on that."

The Boulder station at Loopline Park was established in 1897 and once ran about 100 trains a day moving miners, timber and equipment to the Golden Mile. Tours were operated along the line between 1978 and 2004 until the Super Pit expansion ended its run.

The second stage of the project will extend the line towards the top end of Hannan Street to ensure a steady stream of tourists for the West Australian Museum – Kalgoorlie-Boulder.

Report from *Kalgoorlie Miner*, 6/7/15

OVERSEAS NEWS

WAR OFFICE LOCOMOTIVE TRUST, Derbyshire,

This small volunteer group is currently restoring 1916 2ft gauge ex WDLR 303 4-6-0T (Hunslet 1215 of 1916) in a workshop in north Derbyshire.

According to the latest War Office Locomotive Trust update the ground-up restoration is continuing at speed after gaining extra funding. It said: "The slidebars are on and very carefully set up, the axleboxes have all been fitted to the axles and these are now in place in the chassis, pistons, rods, slippers and brake gear are all on order. The bodywork has continued to get attention with the fake rivets all installed and painted up as well as many other items polished and cleaned. The boiler is also now well on with nearly all components made and more of it getting rivetted together."

Mike Lynskey, *Killamarsh Chronicle*, www.warofficehunslet.org.uk and Moseley Railway Trust Fleet List website 2015

2014 JLN SOUTHERN AWARD

Each year the LRRSA Council recognizes the efforts of researchers, writers and contributors for the publication of high quality articles on light railway subjects. The JLN Southern award is made annually for the best article covering research of light railways for the previous calendar year.

Commencing from 2014 the Society is also recognizing a second award for the first time. It is the "LRRSA High Commendation Award". This award recognizes excellence in a published article from those unsuccessful in winning the JLN Southern Award. From year to year there may be more than one recipient based on the recommendation of the JLN Southern judges.

The Judging Panel once again comprised three highly qualified people in the field of railway research. Bob McKillop was previously one of the Editors of *Light Railways* magazine and is currently the Editor of *Australian Railway History* magazine and brings a wealth of experience to the Panel. Roderick Smith is a former President and Treasurer of the LRRSA and the founder and Editor of *Rail News Victoria* and also brings a strong background in the field of publishing railway related articles. Dr Ruth Kerr is an eminent historian based in Queensland and is the President of the Federation of Australian Historical Societies Inc. She is an experienced historian in mining, regional, economic and company history, and has written a number of books on these subjects.

For the 2014 calendar year the judges have assessed each article that was published in *Light Railways* magazine on the basis of original research, presentation, readability, referencing and the appropriate use of maps, diagrams and photographs.

After much consideration, the Judging Panel made the following recommendations to Council, which have subsequently been approved:

JLN Southern 2014 Award

Ian McNeil for his two-part article about the British and Australian Timber Company Limited operations and tramways at Coffs Harbour and Woolgoolga

LRRSA High Commendation Award 2014

Jennifer Parnell for her article titled 'Genesis of the Marrawah Tramway' in north west Tasmania.

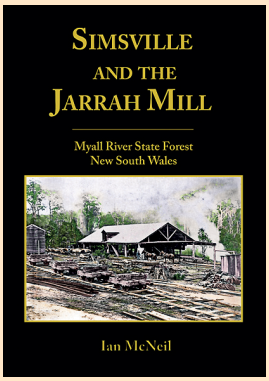
The LRRSA Council would like all members of the Society to join them in congratulating Ian McNeil and Jennifer Parnell for their achievements.

Nominations of non-LR material (all LR articles are automatically included) for the 2015 calendar year are invited and may be forwarded to the Hon Secretary, Light Railway Research Society of Australia Inc., PO Box 21, Surrey Hills Vic. 3127

New from LRRSA Sales ...

Simsville and the Jarrah Mill

Myall River State Forest, New South Wales



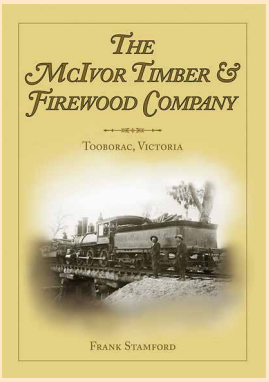
By Ian McNeil
Published by the LRRSA
Soft cover, 96 pages, A4 size
55 photographs, 12 maps and diagrams, references, and index.

The history of a 3ft 6in gauge tramway and sawmiling operations at the village of Simsville, near Stroud. The tramway used three Climax geared locomotives.

Price $29.00 plus postage
(**$21.75 to LRRSA members)**
Weight: 490 gm

The McIvor Timber & Firewood Company

Tooborac, Victoria



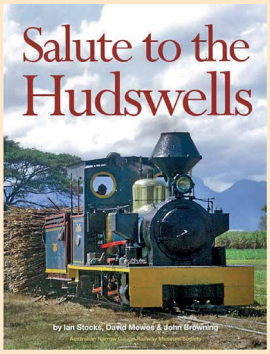
By Frank Stamford
Published by the LRRSA
Soft cover, 104 pages, A4 size
104 photographs, 23 maps and diagrams, references, and index.

The history of a 5ft 3in gauge tramway from Tooborac to Mitchell's Creek, Puckapunyal, Moormbool West and Cherrington.

Price $30.00 plus postage
(**$22.50 to LRRSA members)**
Weight: 490 gm

Salute to the Hudswells

By Ian Stocks, David Mewes & John Browning



Published by the Australian Narrow Gauge Railway Museum Society
Soft cover,
144 pages, 210 x 274mm

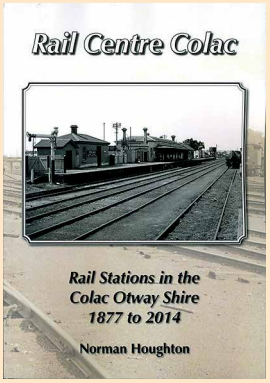
Gives the history of 41 Hudswell Clarke locomotives that worked on 2ft gauge sugar cane lines in Queensland and Fiji.

Profusely illustrated with photographs and scale drawings.

Price $35.00 plus postage
($31.50 to LRRSA members)
Weight: 525 gm

Rail Centre Colac

Rail Stations in the Colac Otway Shire 1877 to 2014



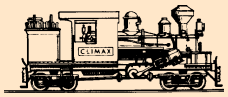
By Norman Houghton
Published by the author.
262 pages, A4 size, soft cover, many historic photographs.

Gives a detailed history of every station and siding from Birregurra to Pirron Yallock, and on the Alvie, Beeac, Forrest, and the Beech Forest narrow gauge line (which takes up 105 pages, plus 21 pages for its junction station - Colac).

Price $63.50 plus postage
($57.15 to LRRSA members)
Weight 770 gm

Postage and packing: Within Australia, up to 250gm $2.10; 251 to 500gm $5.10, 501 gm to 3 kg $15.00, over 3 kg to 5 kg $18.70
Send to: LRRSA Sales, P.O. Box 21, Surrey Hills Vic 3127.
Payment may be made by cheque, money order, Mastercard or Visa.

Buy securely on line,
see our web site:
www.lrrsa.org.au



An invitation to join the LRRSA ...

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- Meetings in Adelaide, Brisbane, Melbourne and Sydney
- Tours to places of light railway interest

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Includes LR Nos 244 to 249 (Overseas by airmail: NZ, PNG, Japan, South-east Asia - $A65.00; Rest of world - $A77.00).

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- If joining in December or January, pay $24.00 ($32.50/$38.50 overseas) and receive 3 issues of *Light Railways* (Nos 247-249).
- If joining in February or March, pay $16.00 ($21.67/$25.67 overseas) and receive 2 issues of *Light Railways* (Nos 248-249).
- If joining in April or May, pay $56.00 ($75.83/$89.83 overseas) and receive 7 issues of Light Railways (Nos 249-255).

Join easily on our website: www.lrrsa.org.au

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

I, _____
(full name of applicant)

of _____

_____
(address) (postcode)

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

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Name on Card _____

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