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Onslow Observations Timber from Purgatory Hume Weir Album

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The Light Railway Research Society of Australia Inc.

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Light Railway Research Society of Australia Inc.

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Cover Photo:

Harman loco employed on Hume Weir construction 1925. See page 25. Photo: Mark Plummer Collection. No. 129 JULY

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EDITORIAL

As a nation we have been called upon recently to become more clever, more resourceful, more thrifty and more competitive on the world stage. The implication is that we have not been clever or resourceful enough in the past.

For nearly 20 years the journal has been describing the engineering aspects of light railways. Most of these railways have been in isolated forest areas in challenging terrain. Professional surveyors and engineers were involved constructing many of these railways and their contribution should not be overlooked.

Nevertheless, a significant amount of track kilometres, bridges and other structures were designed and built by bush engineers. These were men whose education ran somewhere between grade 6 to grade 8 but whose practical sense and experience were second to none. These men constructed tramways in sometimes unbelievably rough terrain, across swamps and bogs, straight up and down steep slopes and propelled the vehicles with all manner of devices — animal, human, mechanical and gravitational. Some schemes worked, others did not, but at least every option was tried.

This journal should be proud of the role it has played in documenting these engineering challenges and operations and bringing to the wider public the achievements of the bush engineers.

Norm Houghton

ONSLOW OBSERVATIONS

by David Whiteford

In previous issues of this journal Frank Stamford has written about the coastal tramways on the north-west coast of Western Australia. Since these articles in 1974 quite a few changes have come about and this piece represents an update.

Concern has been expressed in light railway circles on various occasions that cyclones making a direct hit on Onslow may have damaged the preserved town train. In April 1981 the town train was still in very good condition on the short length of track in the main street but by March 1988 it had been moved to the old depot area which has been developed as a museum.

State Ships had ceased calling at Onslow by 1972 and the railway from the jetty to the goods depot has been removed for many years. By 1974 part of the seaward end of the jetty had been demolished but until 1981 only a further short, end portion had been removed to prevent access to the remainder. However, total demolition of the jetty has occurred since.

In 1976 I observed the depot area as still intact but by 1981 the construction of the Onslow Sun Chalets resulted in the removal of some depot track and the very rough 'shunting' of wagons onto the remaining section. Some damage to wagons

Onslow goods shed and rolling stock, March 1988.

and one broken crane frame resulted from the move. By 1988 the depot area had been further reduced to allow accommodation expansion at what is now Trval Lodge.

Since 1974 a large number of wagons have been removed or scrapped. At my 1981 visit the following rolling stock still existed in the depot; flat top wagons 27, 28, 29, 31; low side wagons 19 and ?; and the hand crane. In March 1988 the same wagons survived but they had been consolidated to a smaller area of the depot and the preserved train was sited adjacent to the goods shed platform. Piles of rails, wheels and other remains could be seen near the depot boundary and the remains of four 1906 (axle box dates) wagons lay on the Ashburton Hill side of the Sun Chalets.

I could not identify the route of the Ashburton Hill extension but in the quarry area were a few sleepers and a length of rail.

The preserved train consists of: Andrew Barclay 0-4-0 petrol loco 3202/1928; low-side wagon (with a 1925 axle box); four-wheel passenger brake van (with an 1899 Metro Railway Carriage & Wagon Co axle box). The loco was NW 1 but welded onto its frame is its newer identification PW 31.

February 1995.1

Photo: David Whiteford.



Onslow was again devastated by a cyclone in



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Onslow goods shed and derelict rolling stock, May 1981. Photo: David Whiteford.



Onslow jetty as rebuilt after the 1935 cyclone. Note the loco, far left.



Tramway crane and loco at Onslow, March 1988. Photo: David Whiteford.

TIMBER FROM PURGATORY

by Ian McNeil

CHAPTER 1: THE PORT STEPHENS HARDWOOD TIMBER COMPANY

1.1 THE CRAWFORD RIVER

The township of Bulahdelah is located at the head of navigation of the upper Myall River, at a point where one of the Myall's main tributaries, the Crawford River joins in. The Crawford isn't navigable and is a placid shallow stream most of the time, though it floods very quickly after heavy rains.

In the upper reaches of the Crawford River were found some of the famous timber 'brushes' of the district; dense stands of moist hardwood eucalypts such as tallowwood, turpentine, red and white mahogany, grey and blue gum. A 1913 report commissioned by Allen Taylor & Co estimated that this area of only 36 square miles had over 460 million super feet of marketable timber valued at over $\pounds1,000,000.^1$

So thick and impenetrable were these brushes that the area earned the name of 'Purgatory' early in the piece. The author was told by a long-time timber worker in the district that the west side of the Crawford River was known as 'Purgatory', and the other side as 'Hell'. When asked how these names came about, he merely smiled and said that if you ever got lost out there you would know why.

1.2 MASTERS, WINN AND LEE

In mid 1901 three Newcastle businessmen formed a syndicate to exploit the timber resources of the Bulahdelah district.² Messrs Thomas Winn, William Thomas Lee and William Masters intended to erect a modern sawmill in the district and initially applied for a lease of 640 acres of Crown



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land north of Bulahdelah near Manning Hill. However they succeeded in arousing strong opposition from established timber interests, and a petition opposing the granting of a lease was sent to the Minister for Lands. In spite of support from the Bulahdelah Progress Committee, the syndicate's opponents won the day.

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Messrs Winn and Lee found themselves in an awkward situation. Confident of obtaining the lease they had already placed orders for a Canadian sawmilling plant. With some degree of haste they resurveyed the available land in the district, and settled on a site on the upper Crawford River, some 11 kilometres upstream from Bulahdelah.

1.3 MILL ESTABLISHED

The selected site was situated on the edge of one of the thickly timbered brushes on the east bank of the Crawford River. This was one of the few flat areas along the upper Crawford – downstream the river flowed through a narrow valley flanked by steep hills. Access to the site was difficult, and caused the syndicate many problems. Site clearing at Purgatory got under way in February 1902³ and work on the mill building started in the same month.

William Lee, one of the syndicate's principals, applied to the Lands Department for a Special Lease to construct an outlet tramway through Crown lands down the Crawford River. Two Tramway Leases were granted (1902.2 Stroud and 1902.16 Stroud) at an annual rent of £25 a year, for an initial period of 10 years.⁴

The Syndicate imported an 8 foot band sawmill, complete with steam engine and edger, from the Waterous Company in Brandford, Canada. The band saw was off-loaded onto Bulahdelah wharf in April 1902, after a long journey through the Myall Lakes and up the Myall River by steam drogher. A local teamster, James Hancock, and his son were contracted to haul it up to the mill site. There was only the roughest of tracks leading up the Crawford and it took the bullock teams a long time to haul the machinery up to the mill. A local story recounts how men with ropes had to hang on to the wagons to prevent them from turning over while inching around the curves on the hillsides on the way up to Purgatory.⁵

1.4 THE PORT STEPHENS HARDWOOD TIMBER COMPANY

Before the mill was finished the Newcastle Syndicate apparently ran short of finance and construction work stopped at the site in July 1902. A local correspondent wrote that the sawmill at Purgatory had been 'abandoned'. This proved to be only temporary as, following an injection of fresh capital, the venture was reorganised as the Port Stephens Hardwood Timber Company. After an eight month lapse, work on the mill site got under way again in February 1903. The new Company pushed ahead vigorously. Seventy men were hired and put to work constructing the outlet tramway from the mill site to the Government road connecting Booral with Bulahdelah.⁶

They purchased an ex-Sydney steam tram motor for the tramway, and a steam traction engine to haul their timber from the tramway terminus to Bulahdelah wharf.

From Buladelah wharf timber was to be carried down shallow waterways of the Myall River and the Myall Lakes by steam punts. At Port Stephens this timber would be transferred to small ships for the trip to Sydney. For this purpose the Company purchased a small coastal steamer the *SS Alert*, a 60 foot long, 30 ton vessel, with a 10 hp high pressure steam engine driving a single propeller.⁷ The vessel only drew 4.5 feet when fully laden, a necessity for crossing the shallow river-mouth bars of many of the NSW North Coast ports.

In March 1903 the Company won a large contract to supply the Sydney City Council with hardwood blocks to Sydney streets. The contract called for the supply of 1,500,000 of 5 in and 6 in square blocks to be delivered at a rate of 200,000 a month. Two months later the contract was expanded with an additional 2,000,000 blocks required. This was worth over £25,000 and was a great boost to the new mill.⁸

They also secured large orders for railway sleepers. By August 1903 a large number of timber workers were cutting and squaring sleepers out in the Purgatory scrub to fill these orders.

1.5 TRAMWAY CONSTRUCTION

In March 1903 the Company commenced construction of their eight-kilometre standard-gauge tramway from the Purgatory sawmill to the Government road connecting Booral to Bulahdelah. As mentioned, seventy men were employed on this project. It must have been thirsty work, for in the same month a Mr J. Kelly was hauled before the court on a charge of sly grogging – selling beer without a licence – at the railway camp at Purgatory. He was fined £3 or 3 months.⁹

The tramway survey kept the route out of reach of the Crawford River's brief but destructive floods. Earthworks were very heavy, particularly along the narrow, middle section where a wide



continuous ledge was cut into the steep hillsides above the river. Substantial embankments and cuttings were built to maintain an even grade and to avoid sharp curves, and there were several high bridges to take the tramway over the deep gullies of tributary creeks.

The tramway was reported as being laid with wooden rails throughout. However the author has found significant numbers of standard-gaugesized dog spikes at various locations along the old formation. This suggests that some lengths at least of the line were laid with iron rails. Perhaps wooden rails proved inadequate at some troubleprone locations and were replaced with iron rails? In view of the no-expenses-spared policy the Company was showing in other areas, the wooden-rails economy was a curious one, though it could be that they were beginning to feel the financial pinch.

It took over six months to complete the tramway and it was finally ready for use at the end of 1903. What the Sydney City Council thought of the delay in supplying their hardwood blocks has not been discovered.

1.6 THE COMPANY'S LOCOMOTIVE¹⁰

At the turn of the century Sydney had an extensive tramway network operated by small, steam, tram motors. It was decided to electrified the network and this job started in 1903. As lines were electrified, steam tram motors were withdrawn from service and offered for sale.

The Port Stephens Hardwood Timber Company decided to purchase one for their tramway, and purchased No. 40. As the Sydney tramways were all 4 ft 8½ in standard gauge, this purchase dictated the gauge of their tramway.

Steam tram motor 40 (B/N 6074 of 1882) was built by Baldwin in Philadelphia, USA, and shipped to Sydney in the same year. It was a small, enclosed 0-4-0 ST steam engine fitted with end platforms so it could be driven from either end. The horizontal boiler was rated at 140 psi and fed steam to a pair of 11" diameter x 16" stroke outside cylinders. The whole unit was just over 17 feet long and weighed 12.5 tons in full working order. A vacuum braking system was fitted.

The only photograph located of Sydney steam tram motor No. 40, B/N 6074 of 1882. Taken near Elizabeth Street, Sydney, pre 1903. Photo: Vic Solomon Collection.

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Builder's photo of Baldwin steam tram motor No. 38, 6067 of 1882, sister engine to No. 40. Photo: C.B. Thomas Collection.

No. 40 ran on the Sydney tramway system for 20 years, carrying thousands of passengers in a variety of carriages. It was one of the first large-cylinder steam motors to be withdrawn as electrification progressed, indicating that it was either due for a major overhaul or that the boiler needed replacing. It was transported to Purgatory in 1903 and commenced running late in the year.

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All the Baldwin steam tram motors were heavier at the front than at the back due to the extra weight of the smokebox and cylinders. This could cause a violent rolling motion at certain speeds and may have been responsible for some of the derailments recorded at Purgatory. The wheels also had to be reprofiled to improve the track holding capability.

The little steam tram motor's stay at Purgatory was brief. Less than six months after starting work, the whole place shut down. The assets were auctioned off, but it is not known if No. 40 found another buyer. Steam tram motors were underpowered for most standard-gauge industrial work, and most light railway operators favoured narrow gauges that could be built and operated more cheaply. For many years there were rumours of tram motor remains dumped at the Purgatory Mill site, but nothing could be found during field investigations in 1990 and 1991.

1.7 PURGATORY VILLAGE

The NSW Electoral Rolls of 1903¹¹ record some 24 adults of voting age as being resident at Purgatory. This included the mill blacksmith and the mill clerk, though the mill manager, Thomas Francis Maurice lived much closer to Bulahdelah. Several wives were included in this tally, and given that large families were common in those days, an estimate of some 50 people living at the mill site seems reasonable.

1.8 OPERATIONS

Not much is known of how the mill was operated nor how the tramway was run. Most of what is known came from a visit by Mr Cec Poole, a somewhat eccentric correspondent for the local newspaper. On 5th April 1904 he recorded this i



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description for the *Dungog Chronicle*, and it is worth repeating in its entirety to capture the whole flavour:

"The Port Stephens Hardwood Co has made a great outlay in Purgatory and many of the local people with lifted hands and open eyes declare that 'it will never pay'. At any rate, if the Company cannot command success, they have deserved it. A tramline 5 miles long has been built from the mill to a point about 6 miles from Bullahdelah on the main road. Thence the timber is taken in loads of 8 to 10,000 feet on three trucks hauled by a traction engine to deep water, and so punted down the Myall River to Port Stephens. I had a ride, in and out, on the loco - an old Sydney tram engine, No. 40-with 'Mac', the driver, who is considered a bit of a character. The going is a bit bumpy, and before its wheels were more deeply grooved, the engine had a knack of leaving the line. but it would take more than a little thing like that to upset 'Mac's' equanimity ... Mr Tate is in charge of the blacksmith's shop at the end of the line. He shared his lunch with me, may he never go short of a feed himself.

"The whole show is in charge of Mr T.J. Maurice. I had only a few words with him; he was leaving as I was coming out. When I got to the mill, my guide was Mr R. O'Callaghan who seemed to not only have a great interest in, but much love for his work and plant. Owing to the wet weather, most of the men had not returned from Bullahdelah that Monday. I missed therefore the roar and bustle of the active mill. The mill is two storied, 122 feet long and 32 feet broad. It is I believe up to date in every respect and no necessary item is wanting. The mill engine of 24 hp has much to do. As the timber is brought in from the bush on teams, it is lifted by steam power on the skid, then on to the travelling carriage which runs it up to the whirling band saw. This goes through it as a swaggie goes through his cheque – quick and lively without an effort. Makes no difference if its only 1 inch planks that are wanted.

"What took my fancy most was a rorty cunning little beggar called a steam nigger. Its business was to turn the log over on the carriage, in order that the saw might have a bite at something. Mr O'Callaghan kindly set it going for me. It would dart up and turn the great mass of timber over. No, that wouldn't do. It sank back into its lair again and evidently brooded over the matter, with its iron head just peeping over the pit. Then, again it flashed up, this time in a different place and quite a different

motion. Again the log turned over with an initial groan of protest that was lost as its great side thumped heavily on the carriage. The secret lies in the operator behind, who, with his hand upon a lever of universal joint, admits the steam to various cylinders as required by different motions of his hand. I may further mention the automatic tool sharpener. I always thought the shearing shed cutter sharpener pretty good, but this machine too has a soul of its own apparently. One inserts the article, say a saw, and the machine does the rest. It cannot sharpen too little or too much. Mr F.M. Farly is in charge of the upper floor, and in his case there is no reason to put the term expert in quotation commas. Mr O'Callaghan is second in command, and I tender him my thanks for the trouble he took on behalf of this strange scribbler."

Another brief letter to the *Dungog Chronicle* (22.4.1904) offers this observation of pay Saturdays in Buladelah:

"I notice Bullahdelah is growing fast and becoming quite lively, especially on Saturday nights when the mill hands from Purgatory and other localities come in to cash their cheques. On these occasions Bullahdelah assumes a city like appearance, and I believe as far as whiskies and long beers are concerned, any other town in the State could take a back seat."

1.9 CLOSURE

Within two months of Cec Poole's visit, the Purgatory mill had shut down.¹² Various reasons for this were suggested at the time, the most common being that the sawn timber had to be trans-shipped too many times between mill and market. But the real problem was with the band saw. They were very successful in cutting softwoods in North America, and achieved very high outputs.

The Purgatory band saw was rated at 70,000 super feet of sawn timber a week, a very good output for a mill of that size. However it was less than successful with eucalyptus hardwoods. Unless the band was kept absolutely tight and sharp, it would bend, twist and break. Logs and flitches had to be fed into the saw very slowly, and even then a lot of sawn timber had to be rejected when the band wandered off line.

A last straw for the Company was the general depression in the local timber industry in mid 1904. Prices fell, and they could not pay the local teamsters a high enough rate to haul logs to the mill.



Purgatory sawmill site, 1994. Cast iron fragments from the wood-burning boiler grate. Photo: Collin Wear.

1.10 LIQUIDATION

In May 1905 the Port Stephens Hardwood Company was put into liquidation and, it is presumed, the assets were auctioned off. The tramway leases were forfeited the following year through nonpayment of the annual rentals.

The troublesome band-saw mill was bought cheaply by a Maryborough (Qld) sawmiller, Henry Hyne. He moved it up to Maryborough and used it very successfully to saw hoop pine and bunyah pine, both softwoods. The saw was so successful at this that it was not until 1978 that it was finally pensioned off!

The steam traction engine was purchased in September 1905 by John Breckenridge, a sawmill proprietor from Failford, north of Bulahdelah. Having checked and strengthened some of the timber culverts along the way, he and his engineer Fred Cook drove the machine many miles back to his sawmill. It was reported as being a cumbersome machine and difficult to manoeuvre. Its rear wheels were seven feet in diameter and, when loaded with wood and water for a day's work, weighed about 12 tons. But it could pull up to 20 tons of timber, about twice the amount that could be hauled by a bullock team.¹³

Other items of mill equipment were purchased by James Croll to equip his new mill at Dirty Creek, a tributary of the Myall River.

It is not known what happened to steam tram motor No. 40. Rumour has it that it was abandoned at Purgatory and that up to 20 years ago, parts of it could be seen there. The standard gauge log bogies remained at Purgatory until 1907 when they were acquired by local sawmiller, Frederick Phillips.

CHAPTER 2 – ALLEN TAYLOR vs THE AUSTRALIAN TIMBER EXPORT COMPANY

2.1 THE AUSTRALIAN TIMBER EXPORT COMPANY

In the two years following the collapse of the Port Stephens Timber Company there were no further ventures into Purgatory. The financial losses sustained by the Company's shareholders and directors deterred any would-be entrepreneurs from this area.

Then, in late 1906, the Australian Timber Export Company applied to the local Lands Board for a series of tramway leases into the northern Purgatory region. This company had recently constructed a timber tramway from Mayers Point on the northern shore of the Myall Lakes, 13 kilometres north of Wootton, which was then known as the Coolongolook Brush. At this location they were also operating a sawmill.

The Australian Timber Export Company had a scheme to bring Purgatory timber to Old Cedar Wharf at Bulahdelah, on the upper Myall River. This was at the very upper limit of navigation for

small, shallow-draught punts. From Old Cedar Wharf, their proposed tramway route ran due west up the valley of Black Camp Creek. At (or about) 5.6 kilometres from the wharf a branch was to turn off northwest into the rugged hills bordering the upper Crawford River. The main line was to continue westwards and cross the steep range of hills separating Black Camp Creek from the Crawford River. The line was to cross the Crawford River just above the Purgatory sawmill and then divide. Another branch was to continue north up the west bank of the Crawford River. The main line was to turn southwest then northwest up the thickly timbered valley of Winn Creek. This was a large tributary of the Crawford River named after one of the old Port Stephens Hardwood Company Directors, Thomas Winn.

The Stroud Lands Board granted them two Special Leases for Tramway Purposes. The first (Stroud 1906.9) was for a 16 kilometre tramway from the wharf site to the end of the first branch. The second (Stroud 1907.8) covered the main line across to the Crawford and up Winn Creek. The third lease applied for (1907.17) which covered the branch line up the Crawford River, was not granted.¹

Concrete dam across Crawford River for mill water supply 1994. Water level unusually low due to drought. Photo: Collin Wear.





Purgatory sawmill site 1994. Uncovered in situ were these probable firebricks. Photo: Collin Wear.

It is not known if the Company planned to establish a sawmill out in the forest, or one at the wharf, or one at all. If their Mayers Point operation can be taken as a guide then a mill site in the forest would be most logical. Also it would have been easier to haul sawn timber instead of logs over the steep range of hills between the Crawford River and Black Camp Creek.

2.2 ALLEN TAYLOR & COMPANY LTD

This activity attracted the attention of a much larger timber Sydney-based company – Allen Taylor & Company Ltd. Allen Taylor had extensive interests in hardwood timber and shipping up and down the North Coast, and were large purchasers of sleepers, piles, poles and sawn hardwood in the Port Stephens and Myall Lakes areas. They viewed the activities of the Australian Timber Export Co as a threat to their own timber supplies, and they were quick to come up with a rival scheme of their own.

They chose to work through one of their local agents, a sawmiller from Markwell called Frederick Phillips, and applied for a number of tramway leases in his name. This stratagem was employed to avoid arousing parochial opposition from within the Stroud Land Board, which had been known to favour local interests over those of 'foreign' companies from the city. Allen Taylor's scheme is best explained by a letter from Frederick Phillips in 1908:²

"Messrs Allen Taylor & Co Ltd Sydney NSW.

"Gentlemen

"In response for your request for a report on the Nerong/Port Stephens district as a timber producer, I beg to inform you that I have been connected with the timber industry in NSW for some 15 years past, starting as an employee in a mill, and having now sawmills of my own and I feel my experience justifies your opinion that I 'thoroughly understand the trade and its requirements especially from the point of view of procuring supplies.' I have been, until recently, a resident of the Cape Hawke district some 125 miles north of Sydney but having for years heard great reports of the Nerong (or Port Stephens) district as a natural timber centre I went there and took a long time to



thoroughly examine it on a horse and foot. I found there a virgin forest of timber held by the Government as a reserve which would supply for many years valuable timber consisting mostly of Tallowwood, Grey Gum, Mahoganies and Blue Gum. These timbers grow nowhere else that I know of in such profusion and in such excellence of quality.

"I immediately took steps to erect a mill on the fringe of it, [At Markwell – author] but the great value will consist in getting into the heart of the forest, and this can only be done by a long and expensive railway which is quite beyond my means.

"I have, under your direction, and with your assistance, obtained from the Government rights to construct a railway to this forest for 25 miles. These rights hold good for 10 years at a time with the right of renewal on reappraisement at the end of that period. The rental charged is very reasonable, at present £5 per mile per annum, and had not varied during the past 20 years nor is it likely to do so in the future.

"With this railway constructed I could put half a dozen sawmills in the forests at various points and keep them all going for 50 years cutting the choicest timber, the demand for which far exceeds supply.

"At present the profit on sawmilling is good even with the expensive system of hauling logs by bullock and horse teams. With a railway, such as you have in contemplation, the cost would be reduced to half besides procuring a supply of better quality logs than obtainable with the present methods of haulage.

"The forest reserves are dedicated and set apart as forest reserves by the Government, who charge a royalty of 5d per 100 ft super on the hardwoods I have mentioned taken from these reserves. They allow any decent respectable person to cut down these trees on payment (in addition to the Royalty) of a timber licence of 10s per year. These charges are devoted towards the regulating of the industry and preservation of forest area.

"A particularly valuable aspect of this scheme is that the railway route connects with Port Stephens which is a magnificent harbour with wide heads and deep water where vessels of 12,000 tons (such as the 'ESSEX'. 'SUFFOLK' and other Federal

Wheel sets originally used on the Crawford River tramway. Retrieved from the Markwell Deep Creek timber tramway by Bill Only and photographed in 1990. Photo: Ian McNeil.





Cutting on the Crawford River tramway, 1994. The earthworks on this tramway were very heavy for a timber tramway and little expense was spared to secure an even grade. Photo: Collin Wear.

Line boats) call now. At an expenditure of £5,000 a wharf could be built on which to accumulate loading at which vessels such as I have described could lie, an additional £5,000 would be ample to provide punts to bring the timber from the water terminus of the Railway to the Export Wharf. This would mean a saving of many thousands of pounds per annum over the present method of shipping timber to Sydney (with its harbour and wharfage rates) for shipment thence abroad.

"The Capital cost of the scheme, including railway, sawmills, punts, wharf and all other charges, would be nearly £100,000, but after allowing for liberal depreciation and working expenses it would yield a net profit yearly of £15,000 or 15%. In case you think me sanguine I beg that you will have independent inspection made when you will find that my estimates will be fully borne out.

"I am, gentlemen Yours faithfully, Frederick Phillips Bullahdelah, 20.3.1908."

In March 1907 Frederick Phillips applied for four tramway leases for Allen Taylor. The first two (Stroud 1907.2 and Stroud 1907.5) were for the forfeited leases of the Crawford River tramway built by the Port Stephens Hardwood Timber Co. The third lease (Stroud 1907.3) was for a 16 kilometre outlet line starting from the Devils Elbow, on the Bulahdelah - Booral Road, about one kilometre west of the Crawford River Tramway's south terminus. This route headed south-east through what is now the Nerong State Forest to Nerong, a village on a navigable arm of the Bombah Broadwater, one of the Myall Lakes. This line was intended as a high-level line, following one of the dominant north-west to south-east ridges up into the Purgatory Scrub. A study of the modern topographic map shows that there was no possibility of a physical link with the Crawford River Tramway.

The fourth lease (Stroud 1907.4) was for an 8 kilometre logging line to run north from the Purgatory mill site up the Crawford River to its

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headwaters. Another lease application next month (Stroud 1907.9) was for an extension of the logging line further north from the headwaters of the Crawford River, across a dividing ridge and down the valley of Mammy Johnson Creek.³

The timing of the rival applications for tramway leases, and the timing of their granting, are too close to be coincidental. It suggests some fierce competition not only to gain the best access route to the Purgatory Forest but also to block the competitor. The choke point where the rival Crawford River and Black Camp Creek routes converged was where the battle was won and lost. Frederick Phillips got in first, and this really marked the end of the Australian Timber Export Company's plans.

2.3 PROPOSAL, SURVEY and CONSTRUCTION

It was the policy of the Department of Lands to place conditions upon the granting of Special Leases for Tramways. They did not wish to see large areas of forests locked up by absentee holders of strategic tramway leases who did nothing with them. The first condition was for the successful applicant to have a route survey carried out by a surveyor, usually within 12 months of granting. The second condition was for the applicant to begin constructing the tramway within one or two years of granting, and to continue building so many kilometres each year.

Of all the leases applied for, and subsequently granted to Frederick Phillips and the Australian Timber Export Company, only two were actually surveyed. The first was Frederick Phillips' 16 kilometre outlet tramway route (Stroud 1907.3) from Purgatory Bend to Nerong Village. The second, surveyed in September 1907,⁴ was the Australian Timber Export Company's route from Old Cedar Wharf on the Upper Myall River, east along Black Camp Creek to the Crawford River thence north up the Crawford.

From all this activity, nothing eventuated on the ground apart from the surveyors pegs. None of the tramways applied for, granted and surveyed were actually built. After Allen Taylor took over the Australian Timber Export Company in 1909, they concentrated on developing the area tapped by the latter company's Mayer's Point - Wootton tramway. And so the Purgatory Forests gained another respite.

CHAPTER 3 – ALLEN TAYLOR & CO LTD

3.1 INTERMITTENT OPERATION

There are some records in the Allen Taylor & Co archives that indicate that the old Purgatory tram line saw intermittent use between 1910 and 1915. Stacks of railway sleepers were accumulated at the old Booral Road terminus from time to time to help make up Allen Taylor & Co's export orders.

It is possible that they were cut upriver and brought down over the old Purgatory tramway. However there is the question of motive power. The tramway was built for steam traction, not horses, so horse teams could not have got across the undecked bridges. The author could find no evidence at the two bridge sites where bridge timbers can still be found, that any subsequent decking took place. Regarding the steam tram motor, it seems unlikely that it was either available for use, or even usable at that time. Perhaps if the tramway were used, then horse teams were used creatively between bridges and ropes used to haul loads across them.

3.2 THE MYALL RIVER EXTENSION

In June 1915 Allen Taylor & Co Ltd finished relaying their tramline between Mayer's Point, on the Myall Lakes, and Wootton with steel rails. A 3 ft 6 in gauge A-Class Climax loco had been imported to work the line which was officially re-opened on Friday 25th June 1915.¹

The Company chairman, Sir Allen Taylor, was a strong and enthusiastic advocate of timber tramways, and he now turned his attention to the Company's Purgatory leases. His plans for the existing Purgatory line were twofold. Firstly he planned an 11 kilometre extension of the mill outlet tramway to a wharf site on the Myall River about 1.5 kilometres downstream from Bulahdelah. Secondly he planned to build a logging tramway north from the mill site up the Crawford River to tap the forests of the headwaters.

He organised the purchase of several key properties in support of the scheme. Three acres of land on the banks of the Myall River were bought for a timber depot and wharf site. The private property between the southern boundary of the State Forest and the Booral Road was purchased outright to give an easier tramway access to the Myall River flood plain. In the forest itself, a large paddock known as Schultz's was bought on which to spell the Company's bullock teams. The logging tramway leases along the upper Crawford were



South approach embankment to the Big Bridge, Crawford River Tramway. Bush cleared by fire February 1994. Photo: Collin Wear.

renewed. Special leases were applied for to build the Myall River tramway across two portions of Crown land -a Water Reserve and a Camping Reserve.

The Stroud Shire Council gave its permission to the Company to construct the Myall River link alongside the Booral Road for most of its length. In April 1916 work got under way from the Myall River end. A gang of men commenced clearing the right of way and preparing the formation. The first 6.4 kilometres were across flat flood plains and presented no problems. The formation mostly consisted of a simple earth embankment about one foot higher than the surrounding terrain. About 800 metres from the Myall River the formation joined the route of the Booral Road, and in places was built substantially on top of it.

As the formation got closer to the existing line, the country became hillier, and the earthworks became more substantial. Several tributary creeks of the Crawford River had to be bridged and there were some large cuttings, sidlings and embankments. The formation joined the old Purgatory line at a place called Nerong Junction. This was about 800 metres short of the southern Booral Road terminus.

3.3 SIR ALLEN'S INSPECTIONS

Sir Allen Taylor made regular tours of inspection of all his Company's interests and investments. His reports are always interesting. As well as reporting factual observations to his fellow directors, he would include his own thoughts, plans, criticisms and dashes of personal philosophy. He penned this report after visiting the tramway construction site on 22nd June 1916:²

"Nerong to Bullahdelah Tramline

"A flying inspection from the motor car only was made of the work done although the section between the Bullahdelah Road and Sutton's was traversed and the work found to be O.K. The fact, however, that so far no definite agreement has been drawn up between the Company and the Stroud Shire Council is a matter that must receive immediate attention from Head Office. The Council have agreed to the plan that was sub-

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mitted and their consent has been obtained but as we appear to be monopolizing the roadway in places, it is certainly advisable to arrange with their Engineer to inspect and approve in writing all the work that has been done up to date, and further arrange with him to inspect from time to time and have such inspections properly recorded in some way. Then again, the line traverses Crown Lands, the leases for which have not yet been granted although our surveyors might have arranged for Permissive Occupancy pending the granting of such leases.

"Messrs Dobbie & Kenny must be consulted and all agreements and the necessary leases should be fixed up so that our tenure cannot be questioned later. Excellent work is being done by the Bridge Gang while the formation of the road ready for the sleepers is well advanced. We refer of course to the section from the end of the Nerong Line to the Bullahdelah River near Avery's property. So far only £800 has been spent with sundries say £1,000 altogether and from that can be seen from the cursory inspection the Company has received splendid value. The policy of using wooden rails is not a good one for this line and if this part of the capital expenditure could be deferred for some time we might possibly see our way clear to face the expense and install steel rails. We should have to wait until we had an opportunity of buying say 700 to 800 tons of rails at a cheap price but this might come within the next 2 years. If however it does not come and the trade should warrant it then we could put the box rails down but the outlet must be more promising than it is now. The question that might arise is to how we are going to get sufficient logs to keep the mills going properly. As we have two locos on the Wootton line now it might be possible to work this line to its fullest capacity say for one or two years and let us hope that this world-wide upheaval will be over. We should be able to buy our rolling stock, rails and accessories much cheaper than if we attempted to do so now. It is a matter that requires very grave consideration. The box rails are very much cheaper (say of the price) but when you take into consideration the cost of maintenance - the loads that will be drawn on them - the speed that can be obtained by the loco - one must admit that the results would be much more satisfactory in every way. Steel rails will last 20 years; box rails would entail heavy costs in renewals and upkeep. This matter must be determined at an early date."

However, Sir Allen's hopes were not realised. It proved impossible to obtain steel rails at anything but inflated war-time prices, which the Company could not afford. By late 1916 work had ground to a stop. Following a further tour of inspection on 9th March 1917 Sir Allen Taylor wrote:³

"Bullahdelah – Nerong Extension

"This work was deferred last November. Up to date we have spent £2,400. Now waiting for rails, etc. Most of the timber is available to complete the bridges to the main junction and will require £400 to £500 to cover the necessary labour. This matter might be considered later on but I fear if the timber on the side is not used now it will depreciate very much. The sleepers for this section are stacked along the line; in all about 17,000. An excellent lot.

"Re: Insurance. It will be advisable to have them covered also all the timber available along the side of the line for constructional purposes. The danger is that if the bush dries we run the risk of someone indiscriminately lighting fires or some of our 'kind friends' might feel disposed to fire the stacks. The value is approx. £1,000."

3.4 ABANDONMENT

But in November of that year, a reflective Sir Allen was to write that he very much regretted having spent so much on the Purgatory extension, as that same amount could have effected badly needed improvements to the Wootten line.

Unfortunately for the Company this is as far as they were ever able to progress with their Purgatory scheme. Rails were not obtained, and by the time that World War 1 ended in 1919, the Company's policies regarding tramway investments had changed. By this time they had spent large amounts of capital on their Wootton tramline, which had never really paid enough back in return. In spite of their Chairman's continued enthusiasm for tramways, his fellow directors would not approve any further expenditure on the Purgatory line.

A brief upturn in timber prices in 1920 persuaded Sir Allen to have one more try. He instructed the Company's Port Stephens Superintendent 'to brush the line thoroughly, cut down all the suckers and let all sun possible on the track and bridges' but later in the same year he acknowledged the inevitable and gave instructions that all the stacked sleepers and bridge timbers be sold off or cut up for dunnage. In 1921 the remaining tramway leases were allowed to lapse, ending the hopes of a tramway to Purgatory.



Tramway cutting on Crawford River Road, half-way between the mill and road terminus, 1991. Dogspikes can still be found buried in the road along this section.

CHAPTER 4 – EPILOGUE

Tramways were never to play a significant role in the timber industry on the Crawford River. The famous brushes were not systematically logged until forestry roads were pushed into the Myall River State Forest in the 1930s and 1940s. The successors of the logging tramway – caterpillar tractors and motor lorries – finally succeeded in getting timber from Purgatory.

Some 90 years after the Port Stephens Hardwood Timber Company folded, there are still some substantial remains of their enterprise to be seen. At the old Purgatory mill site, a low concrete dam still holds back some of the shallow Crawford River waters. Pieces of old brick mark the site of the mill's foundations.

The formation of the original Purgatory tramline is now mostly occupied by the modern day Crawford Forestry Road. The old cuttings, ledges and embankments along the way are clearly visible. Sharp-eyed observers will find quite a few dogspikes half buried in the road. Just north of the forest boundary, the road leaves the formation to detour around a wide deep gully. The old tramline went straight across on a high bridge flanked by tall embankments which are still pretty much intact. They form a solid reminder of the substantial nature of the tramway. At the bottom of the gully lie some of the old bridge timbers.

At the southern – Booral Road – end of the tramway, some of the formation was reused in 1939 in an unemployment relief scheme that planned to push a forestry road north towards Craven and Gloucester. About 3 kilometres was completed then World War 2 broke out and the scheme was abandoned.

Little can be seen of the earthworks that Allen Taylor began in 1916 to extend the tramway through to the Myall River. There are two substantial cuttings near the Booral Road, but elsewhere this road has covered all traces. On the west bank of the Myall River, where the Company planned a depot and a wharf site, there is still a short length of low embankment marking the route of this aborted tramway. The NSW Lands Department holds records showing the Crown land tramway leases and rights-of-way across private property that Allen Taylor negotiated for their Myall River Extension.

Also listed are the portions of freehold land they bought along the Crawford River and on the Myall River. Old copies of Nerong and William parish maps show not only the route of the old Purgatory

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- Minutes of the Sydney City Council Works Committee, 1.4.1903 and 1.5.1903.
- 9. Raymond Terrace Examiner 20.3.1903.
- NSW Tram Car Handbook Part 2, N. Chinn & K. McCarthy, 1976.
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- 'Mills Merchants and Migrants the Breckenridge Story', M. Breckenridge 1992.

Chapter 2:

- 1. NSW Government Gazettes; 17.4.1907; 9.10.1907; 11.12.1907.
- Allen Taylor & Co Ltd Business Records, State Library of NSW, ML.MSS 2051 Box Y567.
- 3. NSW Government Gazettes; 27.3.1907; 8.4.1907.
- 4. Dungog Chronicle 27.9.1907.

Chapter 3:

- 1. Dungog Chronicle 11.6.1915.
- Allen Taylor & Company Ltd Business Records, ANU Archives of Labour & Industry, Deposit 44, Item 4.
- 3. ibid.

Tramway, but also the tangle of surveyed tramway routes up the Crawford River and some of its tributaries. These maps do not distinguish between what was actually built and what was only surveyed, often misleading researchers working in the area. And finally there are two tributaries of the Crawford River – Winn Creek and Lee Creek – named after the old Port Stephens Timber Co directors.

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JULY 1995

HUME WEIR ALBUM

Construction of the Hume Weir on the Murray River near Albury ran from 1919 to 1934. Some 20 locomotives of various gauges were employed at the site. See LR 23, Autumn 1968. The following images depict some phases of the work.



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LETTERS

Dear Sir

What is a Light Railway? (LR 125)

Following on our question of what a light railway is, two further examples are submitted for readers to deliberate on. One photo (dated 22.3.1945) shows a Singer 7/27 double needle sewing machine. The machine was located in the Enfield Tarpaulin Factory operated by the NSW State Rail Authority.

The machine was used to sew together lengths of canvas into tarpaulins for covering open railway wagons. The machine was driven by a system of belts and pulleys with a foot brake used to disengage the clutch. The sewing machine was located in a break half way along a narrow bench. Beside the bench was the electrically driven table known as a 'running table'. The table was driven by the sewing machine itself and was guided past the sewing machine on floor mounted tracks. The table supported the weight and bulk of the canvas as it was fed through the sewing machine.

Reference: Godden, Mackay, 1991. Enfield Tarpaulin Factory, history, operations, and building fabric. Heritage Report for the SRA.

The other photo, p. 30, shows a short trolley line in Lackey Street, Haymarket in the city of Sydney. The photo is undated. An air operated winch lifted up a bucket full of spoil from a tunnel being excavated at the base of the shaft. The operator moved the wagon backwards where the skip was loaded onto the wagon. once placed onto the wagon, the operator then pushed the wagon forwards by means of the long steel handle in his hand. At the end of the line the skip was emptied and returned empty to the shaft.

But are these light railways? If one says that to be a railway the motive power must move with the load, then one rules out inclines, as the winch remains stationary.

Readers are invited to comment.

Jim Longworth, Cheltenham, NSW. Dear Sir

Re: East Otway Reminiscences LR 126

Would it be possible to record, once and for all, that 'Roby' (p. 12) is Robey & Co. Engineers, of Lincoln, England and 'Garratt' (p. 12, 14 and 17) is Garretts of Leiston, England.

Garretts were manufacturers of, among other things, the portable steam engines much loved by sawmillers and are not to be confused with GAR-RATTS, which are articulated steam locomotives, manufactured principally by the now-defunct company of Beyer, Peacock & Co Ltd, Manchester, England. (Unfortunately, some English books and magazines misspell Garratts (the locos) as Garretts!)

Re: What is a Light Railway? LR 125, p 26 Messrs Longworth and MacDonald have resuscitated an interesting, but unanswerable, problem since each person sees the question differently. The Society's policy document (deliberately?) leaves the definition of a Light Railway open to interpretation. There appears to be no commonly agreed definition of what is a Light Railway in the Australian context.

Basically, the so-called 'light railways' that we study are either government or non-government operated, have one principal traffic or function and, as Jim and Bruce stated, are not common carriers although, like all good rules, there are exceptions.

If one changes the question from 'What is a Light Railway?' to 'What is an Industrial Railway?', the answer becomes more apparent. For what we study are principally industrial railways (i.e. they exist merely to facilitate the operations of their owners principal business) together with a few cross-overs from the government systems in exceptional cases.

Maybe more relevant questions to ponder are, 'Does the Society's name adequately describe its principal activity?, 'Does it confuse/deter potential





members?' and 'Should we consider changing it?'. Some people tend to confuse Light Railways with Light Rail, i.e., urban electric heavy tramways. Additionally, the 'light railways' of today tend to be 'heavy railway', i.e., sugar, mining and tunnelling. The lines of yesteryear that looked like a couple of pieces of wire nailed to matchsticks have long departed. May I suggest that a name such as 'Industrial Railway Society of Australia' or similar, ('IndRails-R-Us'!?) would better describe our field of interest, past and present. Not perfectly described, you'll note; just better than what we have. What do the members think? Anyway, back to the photos in LR125. I found both pictures interesting, even if they are only pieces of machinery resting on rails. The 'New Improved High-Speed Steam Travelling Bark-Hut and Winch' is a gem and I find no objection to their presence in LR. So long as they have wheels, run on rails and serve industry.

APRIL 1995

Re: Kandos Limestone Quarry and Fyansford's Purcell Loco (both LR126 p. 22)

During the Society's visit to the ACL Recreation Club's Museum at Fyansford in 1990, photographs of both the above were on display. One of the photos of Kandos quarry (Australian Cement Ltd and Kandos Cement Co Ltd merged in 1929 to form Australian Portland Cement Limited hence the connection) was a panorama measuring some six feet long! Maybe the Editor could obtain a slightly reduced copy for a middle-page spread in LR. The photo of the Purcell loco, although very poor, shows an engine very similar to that on the back cover of LR105, lying out of use at Fyansford. The Purcell had been acquired to assist in the construction of the tunnel, presumably for earthmoving duties. This would agree with the dates kindly supplied by John McNeil.

Another small item that should be recorded in LR relates to an article by Ted Stuckey in LR72 entitled 'An Australian Diesel Mine Locomotive'. The photos accompanying that article were thought to have been taken in the quarry at Batesford. Mr Dolder advises that the supposition is correct. The loco, a Malcolm Moore 0-6-0DM, was transported to Geelong for tuning and testing under load, thus being the first diesel loco into the quarry as Bo-Bo DE *Wesley B McCann* didn't arrive until 1956.

Re: Anthropomorphism, and Fairymead No. 1 (both LR 126, pp. 19 and 23)

Bruce Belbin is to be congratulated on his article re Fairymead No 1. The point raised by Chas Bevan, whilst valid, in no way affected the article. I think the human traits often attributed to steam machinery are one of the alluring characteristics that attracts afficianados. One can't get very excited over an electric motor, however a steam loco (as any fireman or driver will attest) can be a 'many-faced beast'. Whilst we all really know it is just a machine, maybe subconsciously we find it comforting to think that the machine has a 'soul'. The cases mentioned by Chas were not intrusive and certainly didn't impinge on the status of LR.

Of more importance is the photo of No 1 at Fairymead c. 1892-4 (p. 23). The English *Narrow Gauge* No 143, Summer 1994 (Narrow Gauge Railway Society) includes a photo of the loco portion of the same picture, from the original glass negative. It is of exceptional quality. Could our Editor liaise with his NGRS counterpart to obtain a print for a future LR front cover please? It is such a magnificent photo, presumably one of several of the sugar industry which the 'NG' contributor has access to, that its publication in Australia is absolutely mandatory.

Re: Goodwood (LR 125 p. 15)

It is now my belief that the correct spelling of 'Mullundung' forest is Mullungdung. I thank Colin Harvey for bringing to my notice several official documents which confirm this spelling. Phil Rickard

Ringwood, Victoria.

Dear Sir

Baldwin Loco 8130 LR65

The W.A. Timber Company, Wonnerup operated their mills and railway from 1871-87. W.A.'s first steam locomotive, 'BALLAARAT' (Victoria Foundry, 1871) hauled the loads of logs and sawn timber from the timber station to the mill and Jetty at Lockeville. In LR65, 'The Saga of SANDFLY and the Lost Tribe', the late John Buckland believed Baldwin B/No 8130/1886, replaced 'BALLAARAT' on this railway in 1887. This is possible, even though no mention has been found of a second locomotive at that time. Certainly the company was experiencing very good times during 1885-86, with every reason to expect it to continue. 'BALLAARAT' was old and worn out, and the order for a new similar 0-4-0ST type was not unrealistic.

One of 'BALLAARAT's cylinder ends is inscribed 'WATC 24-33-1887', which suggests the expenditure was justified with every likelihood of continued operation. The newspapers even reported in April 1887 that the company had 'secured more orders'.

It was therefore a surprise when the whole operation closed forever, only a few months later. The subsequent attempts to reopen the mills became embroiled in a series of complex issues which dragged on for 10 years.

If Baldwin 8130 did go new to Wonnerup, then she may have been mentioned in the list of assets sold by the liquidator's at auction. This occurred at the 'City of Melbourne Bank Auction Room', Melbourne on the 12 June 1888. Along with the mills. railway and jetty, were various parcels of land. Subsequent to the sale, the local W.A. newspapers reported that 'Mr F.W. Prell of Melbourne had bought the W.A. Timber Co. for £4700.' Do any details still exist in Melbourne for the 'W.A. Timber Co' and the auction? In 1898 an English based company, 'Jarrah Wood and Saw Mills Co' built a new railway along the old 'W.A. Timber Co' formation. It was this railway where the boiler inspector first recorded 'Baldwin 8130' in May 1900.

Jeff Austin Forrestfield W.A.

