

LIGHT RAILWAYS

**Number 75
January 1982**

ISSN 0 727 8101

**Special Feature
Australian Timber Tramways**



**Published by
The Light Railway Research Society of Australia**

Registered by Australia Post - publication No. VBQ1339



No 75

Vol. XIX No. 3

JANUARY 1982

ISSN 0 727 8101

Light Railway Research Society
of Australia

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Subscription: \$A10 per year covering 4 issues *Light Railways*, 6 issues *Light Railways News* and information on Society activities, publications etc. To Membership Officer. LRRSA, PO Box 21, Surrey Hills, Vic. 3127.

Back numbers *Light Railways* and other publications from LRRSA Sales, P.O. Box 382, Mt. Waverley, Vic. 3149.

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Editorial

This is our 75th issue of *Light Railways*. Over the past 20 years the magazine has evolved from a roneoed sheet to a respected historical journal with an international circulation. It is to be hoped that *Light Railways* will continue to evolve and improve over the next 25 issues as the 'flag carrier' for the Light Railway Research Society of Australia. Currently prospects are bright with a wide range of interesting material being supplied by members.

Light Railways owes its existence to the enthusiasm of a small group of Victorian members who began researching the many timber tramways to have operated in that state in the early 1960s. Over the years the journal has built up a detailed record of timber tramways throughout Australia and the social environment which established and supported them. It is fitting therefore, that we should mark *Light Railways* No. 75 with a special issue on timber tramways. Norm Houghton sets the theme by tracing the origins of Victoria's first sawmill and providing evidence that a pioneer timber tramway was constructed at Portland in 1846. This is balanced by Mike McCarthy's article on the many early tramways of the Drouin, Warragul and Nilma Districts of Victoria. Both these items continue the *Light Railways* tradition of recording the history of the many timber tramways of our forests. In marked contrast to this approach is David Burke's record of Ken Hall's first hand account of the making of *Tall Timbers*, a feature Australian film of the 1930s set around a central NSW coast timber tramway. I hope this will encourage further human interest articles of this type for future issues.

Cover. A timber tramway in the 1980's' The Green Hornet (John Fowler 0-6-0T 12271 of 1910) waits for the 'right of way' at Timbertown Railway Station, Wauchope NSW.

Photo: Timbertown, Wauchope.

Victoria's Pioneer Sawmill and Timber Tramway

by Norm Houghton

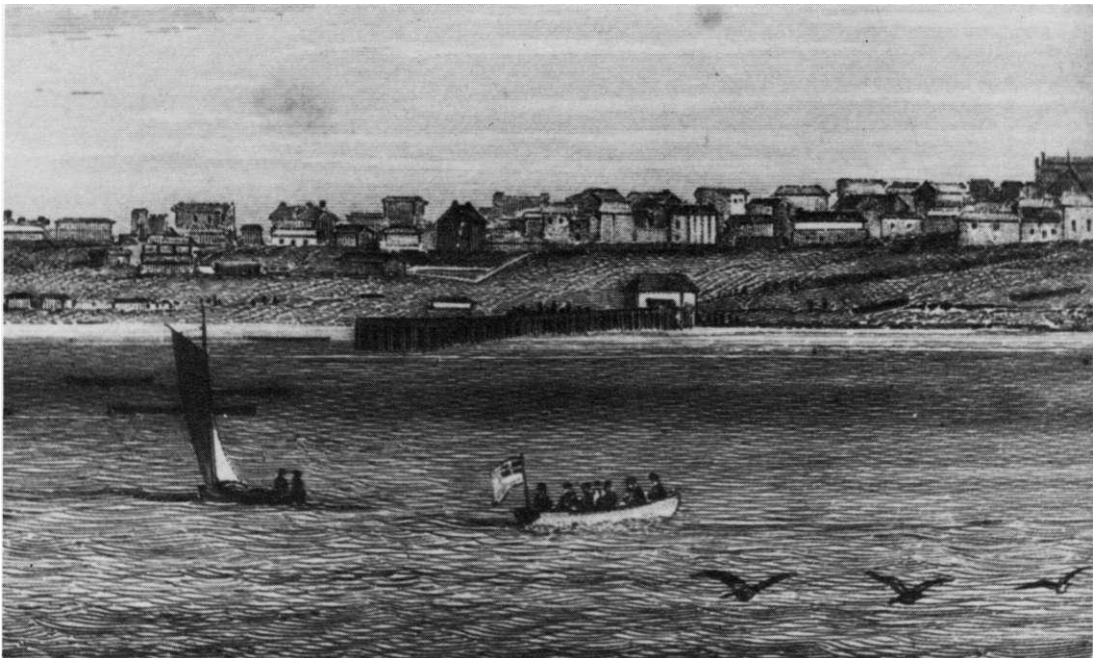
Over the years *Light Railways* has featured many sawmills and tramways around Victoria but so far the actual first sawmill and first tramway has not been chronicled.

In recent times some of Victoria's very early newspapers and other documentary sources have become more readily available, and a reading of these 1840's sources can provide the clues to determining the first origins of Victoria's timber industry.

The settlement of the Port Phillip District after John Batman's feasibility survey of 1835 quickly led to the establishment of villages at Melbourne, Williamstown, Geelong and, independently, at Portland. By 1840 some 13000 Europeans¹ had

occupied Victoria, and Melbourne was the dominant settlement. The timber industry in Melbourne was one of the first occupations to establish itself in order to provide the necessary materials for the construction of business houses, dwellings, wharves, fences etc., but, strangely, the trade revealed a great reliance on imported timber rather than the locally-produced stuff.

There was sufficient local timber within easy reach of Melbourne, and although timber cutters and sawers began exploiting these resources very early, their output does not appear to have provided the bulk of the market. The pioneers of Port Phillip were largely from Tasmania, and they preferred to ship their timber requirements from the mills and forests around Launceston and Hobart.



Melbourne, 1840, a few months before the first sawmill was built.

Geelong Historical Records Centre

Timber merchants, agents and dealers established yards or depots near Queens Wharf on the Yarra River and in the neighbouring streets. Timber of all description was imported and sold as landed with very little cutting or trimming. Thus in came whole logs; pre-cut rafters, joists, battens, floor boards, deals, planks, weatherboards, quartering and scantlings; and split posts, rails, shingles, palings and laths. Cedar from New South Wales and Singapore, pine from New Zealand and the occasional consignment of deals from Scandinavia represented the exotic side of the trade.²

Navigation on the Yarra was hindered by mud banks so the sawn and split timber carried in anything but the lightest vessels was off-loaded into lighters³ in Hobson's Bay and ferried up the River. Logs were made into rafts up to 36 or more feet wide, and somehow propelled to Queens Wharf.⁴

The First Sawmill

This system of distribution worked satisfactorily for the first five years but as the population rose the advantages of a locally-based industry became obvious. Timber merchants began offering to cut timber to size; firewood cutters and splitters became active along Merri Creek, and the major consumers of timber, namely the builders, sought some means to cheapen the cost of their stock in trade.

Messrs. Monger & Hurlstone, a firm of builders, set up a sawmill in Little Collins Street in 1839 or 1840,⁵ but from the evidence available it does not seem to have been powered by machinery and would have relied on manual exertion.

The pioneers of steam-powered mills were Monger & Hurlstone's contemporaries, Messrs. Alison & Knight and Messrs. Manton & Co., and these two firms vied with each other to establish Melbourne's first steam mill.

Alison & Knight⁶ were dealers in general goods ranging from drays to bagged wheat, and it was the demand for man's daily bread that led their thoughts in the direction of a steam flour mill. The market for sawn timber also persuaded them to add a sawmill.⁷

A steam engine was imported from England, and by September 1840 it had arrived in Melbourne.⁸ Alison & Knight then took over Mason's store & ironmongery site on the south-east corner of Collins and King Streets, and began construction of the mill at the rear end of the block.⁹ A well 40 feet in depth was sunk to provide boiler water. The project was supposed to be ready by New Year's Day 1841, but if this were so it must have past unnoticed. It seems

more likely the mill was completed in mid-January or later, for it was not until the 20th of the month that Alison & Knight advertised for the services of a saw trimmer, and not until 10th February that they sought a wood cutter to work in the bush to provide boiler fuel.

In the meantime Manton & Co. had not been idle. John Manton was a Civil Engineer by profession¹⁰ although his main occupation in early Melbourne was as a dealer in timber, land and general commodities, and supplier of warehouse space. He operated from Queens Wharf (such as it then was), and also dabbled in barge building and shipping operations.¹¹

Manton commissioned architect T.H. Price to design a steam mill, store and offices¹² for his Flinders Street site on the lower end of the wharf,¹³ and tenders for construction were called on 16th September 1840. Manton's steam engine was obtained second hand from the Van Dieman's Land Company at Circular Head, Stanley, Tasmania.¹⁴

The foundations for the engine house were laid in early November 1840¹⁵ but the store appears to have taken priority in construction for it was completed first and was opened on or around 20th January 1841.¹⁶ The first reference to Manton's "Combined Steam, Flour and Saw Mills" appeared on 6th February 1841, but a later news item of 17th March indicated the steam mills were still being finalised, so it is probably the completion date was some time in March.¹⁷

The credit, therefore, for Victoria's pioneer sawmill can be attributed to Messrs. Alison & Knight, with Manton & Co. being a few weeks later in second place.

A Timber Tramway?

The first timber tramway in Victoria would appear to be several years behind, and 180 miles from, the Melbourne sawmills - namely the wooden railway on the Portland jetty in 1846.

This jetty was constructed in 1846 by Thomas Scott under contract to the Government. The jetty was provided with a set of wooden rails and trucks to move loading between shipping and the shore.

The evidence for claiming this tramway as Victoria's pioneer one comes from the statements of a group of Geelong residents in 1846.¹⁸ In July of that year a proposal was floated to build a railway from Geelong for 200 miles towards the Glenelg River. The aim of the proposed undertaking was to open up the Western District for settlement. Capital funds for construction were to come from the proceeds of land sales along the route, with half of



Portland Jetty, 1856. Was this the site of Victoria's first timber tram?

Geelong Historical Records Centre

this revenue being devoted to immigration and the other half to the railway.

The interesting aspect of the railway was that its promoters were proposing to build it entirely of wood, and use horse traction. In order to demonstrate that they, the promoters, were not unrealistic fools, evidence was put forward that two wooden railways already operated in south-east Australia; one on the Tasman Peninsula and another on the jetty at Portland.

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MAKING TALL TIMBERS

As told to David Burke by Ken Hall.

Introduction

Only one Australian feature movie film has ever focused on a railway for its story. That film was Ken Hall's *Tall Timbers* made halfway through the busy decade of Australia's Cinesound film production in the 1930s.

Tall Timbers was made on location near Simsville, a tiny village in the forest country of the New South Wales north coast. The story incorporated a 3 ft 6 in gauge tramline that extended from Simsville for some 12 miles (18 km) up to a bush terminus high in the ranges. Pines & Hardwood Ltd. operated the tramway between 1921 and 1941 using four Climax locomotives. This tramway, in real life the only transport by which the timber-getters could get their logs tot he mill at Simsville, was not only a key location for the film, but also the means of transport for shifting the cast and crew up into the big timber country.

Tall Timbers was about the deeds of daring-do and villainy when two big rival city sawmilling firms met in violent competition for valuable forest stands. Shirley Ann Richards was the female lead, Frank Leighton the hero and Joe Valli, an outstanding character comedian of the day, the engine driver. In all the cast and crew numbered some 30 people.

The script of *Tall Timbers* called for numerous scenes along the line - the timber tram on the move and aboard the locomotive footplate, including one exciting sequence in which the rogues dynamite a trestle bridge and the Climax nearly plummets over the brink.

The production of *Tall Timbers* finished in 1936 and the 1/2 hour film was released in 1937. It broke many records for attendance and was shown at the West End and in London.

From 1931 to 1941, the great production years for Cinesound, Ken Hall made 18 feature films. Ken is now retired and lives in Mosman near Sydney Harbour. The following story is Ken's recollection of making *Tall Timbers* on its unique tramway location some 45 years ago.

The Making of Tall Timbers

The concept of Tall Timbers began in a talk I had with a wealthy Sydney man, Archer Whitford, who owned, among many other things, the journal *Film Weekly*. Archer had a property on the north coast and described to me the local timber-getters' unique 'timber drives'. The purpose of these drives was to clear a hillside of trees in one dramatic operation, providing fresh grazing land and extracting any worthwhile timber for logging.

The drive was accomplished by cutting trees on the lower side of the hillside halfway through, and then exploding what they called 'killer trees' at the top of the ridge to send them crashing down and demolishing the others in a wholesale domino fashion.

The drama of a timber drive excited me. I discussed the idea with a number of writers without getting what I wanted. Finally Frank Hurley came up with a story line. John Warwick, our Cinesound production manager, visited the sawmilling companies to learn about timber and ask where we could find a suitable location.

John's activities led us to the mill at Simsville, near Stroud on the NSW North Coast. It turned out to be real hillbilly territory. I took George Heath, our chief cinematographer and Frank Harvey,

screenplay writer, to see the site which was 12 miles in from Stroud by car, in a very beautiful pocket of the hills.

Here we found the terminus of the narrow gauge timber tramway that ran up into the ranges where the really tall timber was to be found. The timber train and particularly the locomotive turned out to be extremely colourful, full of steam and smoke which the crew would turn on whenever we wanted it, to send it spurting around the wheels. I remember the loco was a geared type, it burned wood, the bunker stacked with offcuts from the mill. But those enginemen were professionals, they knew their job. Making lots of clanking noise, we went for a journey on the line which took us over some very lofty timber bridges and into the rainforests.

The timber tram pulled bogie jinkers with a "V" set on them, into which the logs were fitted for the downhill run. In an open space at the top of the mountain a steam dragline brought the felled timber down to the railhead, where a steam crane lifted huge logs of blackbutt on the bogies.

From the bush terminus it was all downgrade. They couldn't overload the tram or go too fast, otherwise we'd end up in a mangled heap. The thing that struck us particularly was those many timber bridges, some of them not terribly sturdy looking. At Simsville the logs were unloaded, straight into the sawmill.

We wrote everything we found on that preliminary trip into the script. The timber tram turned out to be an unexpected bonus. All the production equipment, the crew and the cast had to be carried on the tramway, it was the only transport to location, absolutely no roads. The actors became very nervous as the tram puffed up the mountain and not only the actors let me hurriedly say! Many trips were to give us some frightening experiences on the narrow gauge, looking down from 100 ft or more on those slender trestles on which the industrious white ants had been working for who knows how many years! And white ants - or termites - are particularly partial to Australian hardwood, of which blackbutt is a prime example.

In our screenplay, Frank Harvey and I piled on the action-drama to capitalise on such a great location. George Heath, the cameraman, faced big problems in shooting in the forest. We had no



Producer/director Ken Hall with his wife Iren on location, 1935.

National Film Archives of the National Library of Australia

portable power plant in those days, it all had to be done by natural lighting, using reflectors of course.

Sound stage work was done in the old Cinesound Studios at Bondi Junction (now a Norman Ross store) where George Kenyon reproduced a forest setting including a hut interior (the hut was to be destroyed by a falling tree) on a 150 ft by 80 ft sound stage, the biggest studio facility then in Australia.

With interiors completed we set off for Stroud, a town on the railway where the cast and crew were billeted, and about ten miles from Simsville, the timber-mill hamlet. To reach the big timber location we'd leave Stroud in cars at 7 am and drive to the mill to join the mountain railway. Here we would all load into an open flat car, sitting on anything we could find - boxes, suitcases or whatever. We did it more or less every day except Sunday - film companies work a six-day week.

Shirley Ann Richards was brand new to the acting profession, knew little of its traditions and

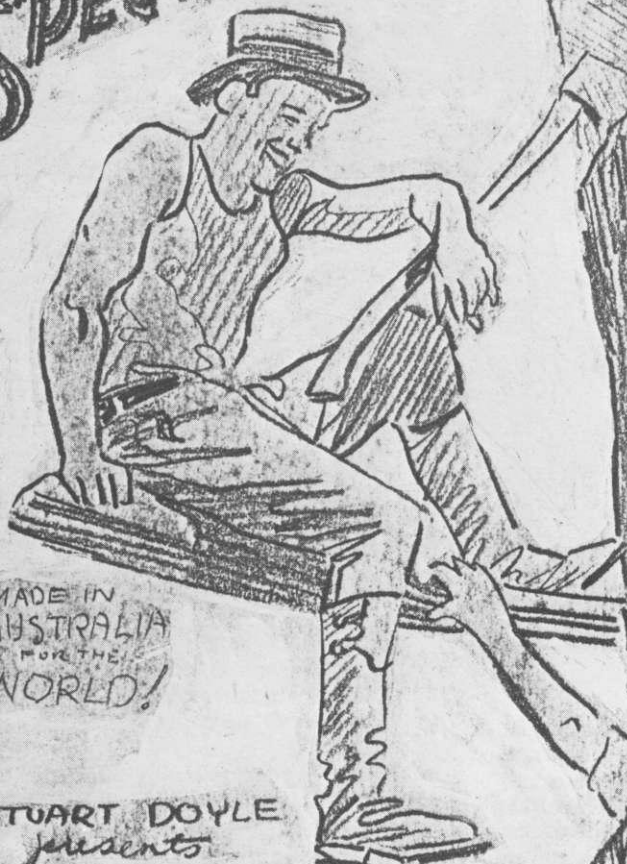
absolutely nothing of its superstitions. One morning, as the tram laboured up the hill, she made the fatal mistake of gaily humming the tune of *Tosti's Goodbye*. The anguished actors roared their supreme disapproval at her and the poor girl, not knowing what it was all about, burst into tears. How was she to know that *Tosti's Goodbye* was - and still is - the worst of all Jonah songs to actors worldwide!

Well, as if to confirm what the actors *believed*, sure enough about three-quarters way up the mountain, in a cutting between two bridges, the locomotive expired with a long whistling sigh. The actors hadn't a shadow of a doubt as to exactly why!

So we waited. The loco crew came back and told us it was serious enough and they'd need a spare part from Simsville. It couldn't be fixed today.

The cameramen packed their bags. How do we get back, they asked? You walk the same as me, I told them. The rest of the cast and crew began to follow. Soon we came to the first trestle where the only way across was to walk on the sleepers - with

ROMANCE!
THRILLS!!
SPECTACLE!!!



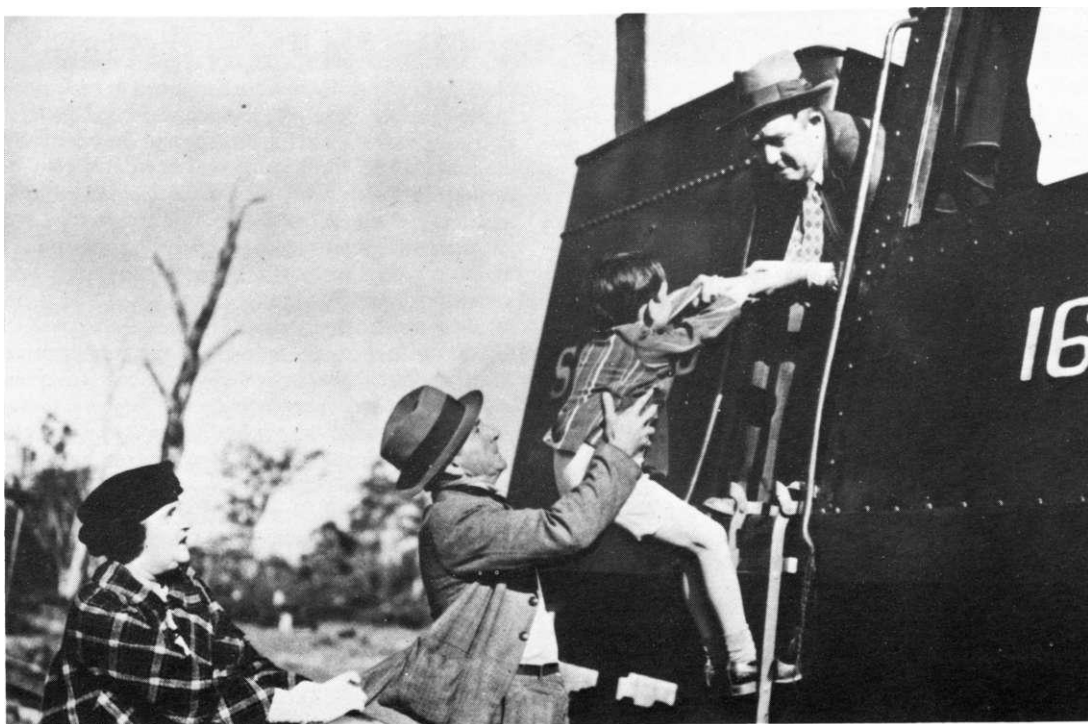
MADE IN
AUSTRALIA
FOR THE
WORLD!

STUART DOYLE
presents

TALL TIMBERS

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OWNED BY CAPT. FRANK HURLEY



An action scene during the filming of Tall Timbers. Note the name "Soward" on the tank side.

National Film Archives of the National Library of Australia

nothing but air between them! What had the white ants been doing? Not a game for superstitious actors! Most of them clambered down the gully and up the other side, damned hard work that was, too. Then we came to one bridge about 120 ft above the gully at the highest point. I remember going to put my foot on a sleeper that wasn't there - just a yawning gap! Seeing this all the rest of the crowd went backwards. But there was no other way. We had a nine mile walk back to Simsville. It was a lost day, all very exhausting and exasperating.

We made the film in autumn, when the weather was good and were about five weeks on location. It took a long while because the slow means of travel cut down the working time. But it was a good life among the trees. We swam in the nature pools.

Opposite: rough for Tall Timbers poster.

National Film Archives of the National Library of Australia

Then came major disaster. The highlight of the film was timber drive, set up for us on a hillside on the Whitford property near Gloucester. We had previously arranged with a local timber-cutting contractor to do the job and they had it all completed with many hundreds of trees half cut through on the downhill side. Everything was ready to bring the trees down at the given signal - as an extra precaution steel hawsers had been strung across the lines of trees to try to ensure they would collapse.

In my enthusiasm I had representatives of the press invited to witness the spectacle, a great chance to get some very valuable advance publicity. About a dozen pressmen, some from interstate, turned up and they all gathered at the site on the big day. I fired the gunshot which was to start the whole operation - all five cameras rolled. . . . the killer trees were to be dynamited ten seconds later. A thunderous roar came from the top of the ridge about half a mile away and the giant 'back' trees swayed

forward and crashed just as Archer Whitford had said they would when the drive was started.

But this crucial time the action stopped right there!

A deathly stillness. A ludicrous anticlimax.... That stubborn forest refused to fall! The "killers" blew apart but the falling domino effect we all anticipated failed to eventuate. The dynamited trees simply fell down without hitting anything else or causing the expected destruction.

I had a very red face. How do you tell a bunch of somewhat cynical journalists that they had made the long journey for nothing. They went home and wrote funny headlines like 'Movie Men Stumped' and 'Forest Fails to Flop - but Timber Drive Does'.

George Kenyon, art director and his crew built a wonderful model of that hillside, about 30 ft x 30 ft. The studio 'trees' were only 18 inches high, each separately controlled to fall as and when required. By intercutting real timber falling we were able to make the whole sequence look very real and dramatic. No one ever suspected a model - until you told them and then of course they said they knew all the time!

At another time we were allowed by the sawmill owners to blow up a trestle bridge on a spur line which was no longer needed. The scene called for Joe Valli to be in the loco cab, talking to a small boy and not noticing that the bridge had been dynamited by the opposition. In the film, the engine is almost

over the gap before it stops.

Finally on a flat near Simsville we invited the public to come one Sunday for a scene that needed plenty of extras. They were supposed to be watching the timber drive. We put the word around that everyone would be in the movies and they came by the hundreds in traps, cars, on horseback from as far as 100 miles away. Even a full-sized bullock team with dray. What a gala day! We loaded the people on the tram, sitting all over the bogie jinkers and took them a way up the track. When we reached a clearing, we off-loaded them all and I told them what we wanted them to do. They responded well to direction, supposedly reacting to the timber drive that there and then wasn't taking place. It was quite a shot! The loco people put on a helluva show, steam spurted, bullocks bolted! Afterwards we held a dance at the local hall. The beer was on, Simsville went out of its mind.

My budget for *Tall Timbers* was £14,000. The good melodramatic action film which resulted from all our effort was well worthwhile. *Tall Timbers* made a hit in the theatre and grossed a lot of money. Thinking back, it was a production that few directors and crews would have wanted to tackle, quite a difficult film to make. And it might not have been made at all - certainly not on that location - without the invaluable help of that wonderful, though sometimes cranky little timber train.

SALES DEPARTMENT NEWS

Light Railways reprints now include Nos. 21 & 22.

Our plan to reprint in limited quantity, early numbers of Light Railways makes progress with the addition of numbers 21 & 22 to those already available.

We can now offer a complete set of reprints of Nos. 13 to 22 inclusive.

Further, a combined reprint of Volume 3 (Nos. 9 to 12), is in preparation and will be followed, in due course by Volume 1 (Nos. 1 to 4) and Volume 2 (Nos. 5 to 8).

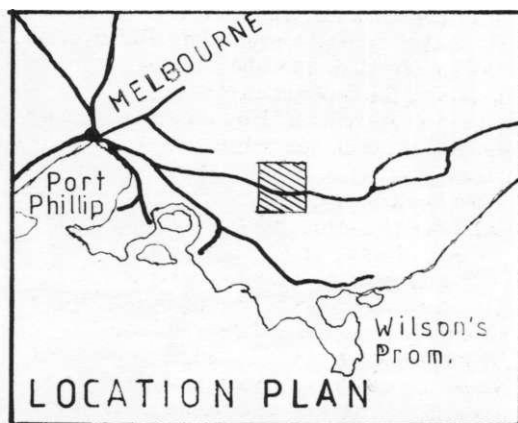
Cost of LR 21 and LR 22; a measly \$1.80 each, posted, or \$1.60 each for those able to buy them at Melbourne meetings.

Early Tramways of the Drouin, Warragul and Nilma Districts

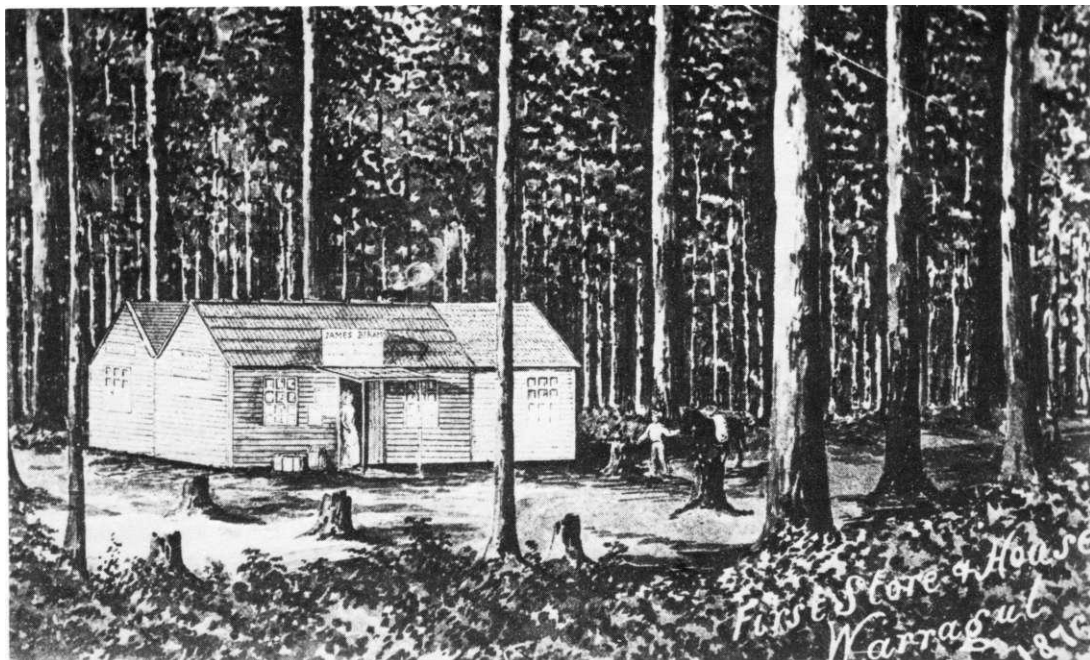
by M.J. McCarthy

On 31st October 1877 a correspondent from the *South Bourke and Mornington Journal* reported on the progress of the construction work associated with the Gippsland Railway which at that time was nearing completion. An extract from that report read as follows:-

Ferns and ferntrees appear tall arriving at Drouin Junction, where are situated the offices of Fisbourne and Morton. The scenery from there was wild and forest like, the railway crossing great gullies on large embankments or passing through fine rock cuttings, coming out again into an immensely timbered country, some trees being 150 feet or more high and as straight as a ship's mast. The land about here



Woodcut depicting the arrival of the first train at Warragul on 1 March 1878



Woodcut of first store at Warragul, 1976 - James Biran proprietor. The store was located close to where Warragul railway station now stands. The photograph illustrates the thickly forested nature of the area around Warragul prior to 1880.

appeared very rich but the scrub was very dense. The timber is White Gum, Blackwood and Messmate. After passing a small miserable looking (so called) township, Warragul, in the heart of the forest, which has great hopes of the future through railway accommodation (living in hopes etc.) through some pretty cuttings to Hazel Creek, which is a charmingly situated little place and will be the station for Brandy Creek.

The correspondent would be in for a surprise if he could see the thriving township of Warragul today, but nevertheless the description of the area as it was in the 1870's is an accurate one. In contrast to the lush dairy pastures which characterise the area in 1981, the hills around Warragul, Drouin and Bloomfield (Nilma) were once covered with extensive forests and supported at least thirty-six sawmills during the period 1876 to 1899, of which a minimum of twenty-two were served by tramlines. But the sawmilling industry was not the only employer of tramways in the area. A bluestone quarry to the south of Drouin also used rail vehicles to carry the stone initially to the railway and later to

the site of roadworks in the area. Perhaps one of the more unusual tramways at least as far as ownership goes, was that which belonged to the residents of Red Hill, a few miles west of Drouin.

The Drouin District

The Red Hill Settlement was established in 1893 by the Reverend Horace Tucker as part of a communal scheme aimed at providing a livelihood for some of the people who were without jobs as a result of the severe depression of that time.

Each family was allotted 10 acres to farm as they wished but each was also obliged to assist in the working of the common land which made up the bulk of the 320 acres upon which the settlement was established.

Much of the property was covered with dense scrub and this was to provide the mainstay of the community. Tucker organised the installation of a small 14 hp firewood mill to supply the Melbourne market and laid a 5ft 3in gauge steel railed tramway to the Red Hill Siding about a half a mile distant from the colony. The tramway incorporated a "switchback" arrangement to negotiate the steep climb up the gully to the mill and much of the line in

the lower section was carried on a low crib-work bridge. It appears that VR trucks were used on the line with the haulage being done with horses.

The settlement met with only limited success as by 1895 following improvement in the employment situation, most of the settlers drifted back to Melbourne. The tramway was subsequently dismantled by the Railway Department and in 1898 the mill equipment was sold by auction.

The town of Drouin was never the timber town that its neighbour Warragul was, the forests in the vicinity consisting of smaller trees and the deep gullies making transport of logs and timber difficult. Nevertheless numerous small mills operated primarily to the south of the town and many of these had tramways of some description although details are sketchy. The earliest known mill was that established by the George Brothers in 1881.

George Brothers

Trading as Western Port Road Sawmills, John and Butler George put their mill onto Silas Symon's property on the King Parrot Creek, 2½ miles south of Drouin. At first they carted their timber to the station by road but during the 12 months they occupied the site a short length of tramway was used for log transport. In 1882 because of difficulties in carting timber over roads in winter, they moved the mill onto 'Wright's Paddock', a little less than a mile south of Drouin and laid a tramway to the station. The mill had been operating for only 8 months when the George Brothers put a second plant onto Wright's selection and laid a branch tramline to serve it. Strangely enough the branch was never used as the timber on that part of the property proved very faulty and in March 1883 the mill was shifted to Bloomfield, eight miles to the east of Drouin. The other mill followed nine months later.

Brown, Cook & Coppin

About the time the George Brothers abandoned their sites at Drouin, George Brown in partnership with Fred and Charles Cook and Charles Coppin put a mill onto D. Chambers property 2½ miles north west of Drouin. The mill worked the site for only two years but during this time a tramway, presumably for log transport was laid. In 1886 the plant was shifted to Jindavick to the north of Drouin.

Furhmann

W.C. Furhmann worked at his mill at many locations around Drouin during the 1880's and 1890's and at least two of these sites were served by tramway. From 1883 to 1886 the mill was located on John McNeilly's property to the north of Drouin

and in conjunction with McNeilly, Furhmann worked a tramway between the mill and the station during this period. In 1899 after an absence from the Drouin area for some time Furhmann shifted his Neerim South mill to Mrs. Walsh's property at Drouin South. A tramway was laid from the mill along Dyall's Road to the main south road from Drouin where the timber was trans-shipped onto road wagon and taken to Furhmann's timber yard at Drouin. The mill was worked at this location for only a year before he shifted it to a site near Longwarry.

Maynard

Henry Maynard erected a mill about a mile south west of Drouin station in 1884 and laid a tramway to the Drouin South Road. The mill worked this site until the property was cut out in 1889.

Gardner

William Gardner, trading as Excelsior Sawmills put a mill onto his property 3 miles west of Drouin in 1896 and laid a tramway to Drouin Station. Previously he had worked the mill on his wife's and son's properties south of Longwarry to where he had despatched his timber by tramway. Gardner worked the line into Drouin until 1899 when the mill was sold and moved away after he had unsuccessfully tried to sell it as a going concern at its Drouin location.

Many other mills, all very small and short in life span operated around Drouin, but no evidence could be found suggesting that these other mills ever used tramways although almost certainly many would have. Some of the more prominent mills were owned by sawmillers such as Edwin Higgs, Edward Edwards, Thomas Cosgrave, Donald Fraser, John Startup, Colin Campbell, the Gordon brothers and Alexander Patterson.

The Drouin South Quarries

In 1891 J.N. Walton, a Melbourne sharebroker, purchased Startup's quarry, two miles south east of Drouin. With the aid of a £50,000 loan from the City of Melbourne Bank, Walton installed an extensive crushing plant at the quarry to supply road making material to the local Buln Buln and Warragul Shires. Under the supervision of Samuel Ogden, a former Victorian Railways engineer, Walton laid a 5ft 3in gauge tramway connecting the quarry with the newly opened Lardner Siding 2½ miles distant and midway between Drouin and Warragul. The tramway was a roughly constructed affair with no ballast and the minimum of earthworks despite the hilly terrain it traversed. The rails were leased from the Victorian Railways.

Around June 1892 Walton purchased a loco-

motive to work the line. Few details of the locomotive seemed to have survived although a local newspaper reported that it weighed approximately 20 tons suggesting that perhaps a small tank locomotive was used. A shed was built to house the locomotive at the quarry and two elevated water tanks were erected to supply the necessary water.

Walton's venture appeared doomed from the outset. The recession that the colony was going through at the time and the high prices he had to charge to meet interest payments on his loan ensured that little business came his way. The end came quickly when late in 1892 the bank foreclosed on his mortgage and in February the following year he was declared bankrupt.

Following Walton's failure the bank placed Samuel Ogen in charge and attempted to keep the quarry and tramway operating but in February 1894, following another poor year, the quarry was closed down. Within a month the plant, including the locomotive, was sold and shifted elsewhere. Over the next few years the quarry was worked spasmodically by the Buln Buln Shire Council on a royalty basis but this arrangement ceased in 1914 when the Council purchased the quarry and equipped it with a new crusher.

At the time the Country Roads Board (CRB) was engaged in constructing roads in the area to the south of Drouin, a task which required large quantities of crushed rock, of which the only local source was the Shire quarry. The Shire responded to this need by erecting a hopper on the South Road in January 1915, and connecting this to the quarry by a 3 foot gauge wooden tramway constructed with the aid of finance from the CRB. Three bogie wagons were built by the Shire Council for use on the line and these were hauled by horses.

The quarry and tramway were officially opened on 8 April 1915 following a ceremony witnessed by representatives from the shire, the CRB and local parliamentarians.

The work was largely completed by 1917 and as a result the tramway fell into disuse only to be resurrected a year later when further road work was undertaken. But after another year of operation and little maintenance it had deteriorated to such an extent that it was regarded as being too dangerous to use. The Council subsequently closed the tramway and sold the remaining useable rails and sleepers for use as fencing material.

In 1920, in response to reconstruction work along Lardner Road and Lardner's Track, the tramway was reconstructed. Using iron rails the line ran for a short distance to the west from the

quarry and with a switchback arrangement a spur line was laid down to the Lardner Road. The tramway was extended along this road and down Lardner's Track as the road making progressed. Following completion of the work the line was dismantled back to the point where the tramway met the road near the quarry. A hopper was erected at this location which, for many years, was served by the remaining quarter mile of tramway.

The Warragul District

Warragul was the centre of the sawmilling industry in Gippsland during the 1880's. As the report from our contemporary correspondent indicated, the forests growing in the area were particularly good and this was soon reflected in the number of mills erected to exploit them.

Trinca

The first to be established was that of John and Alfred Trinca who, trading as Warragul Steam Sawmills, operated close to the railway station for about 3 years from 1878. A contemporary painting of the mill suggests that it was connected to the station by a short length of tramway. The mill was shifted to Jindavick in 1881 where the Trincas despatched their output by tramway to Longwarry.

Smith

Joseph Smith erected the Seven Bridges Steam Sawmills about a half a mile to the east of Warragul in 1880 and laid a tramway to the station. Smith, who had purchased his plant from Overend and Selman at Darnum, worked the mill at this location until late in 1883 when it was shifted to Bloomfield.

Biggs

In January 1880 A.E. Biggs commenced milling the timber from Ben Sargeants property to the south of Warragul at the Victoria Steam Sawmills. Biggs' mill was powered by a 25 hp engine and was one of the larger mills at Warragul.

Biggs twice applied for Shire Council permission to lay a tramway over roads from his mill to the railway station. On both occasions permission was given but because Biggs objected to indemnifying the Council against liability to persons and property, the tramway was never built.

Two log tramways, one serving the higher areas and the other serving the lower areas of the selection, were laid from the mill. Biggs' son, Edwin, who managed the firm for his father, introduced a novel hauling system on the tramways in 1881. Edwin had trained to be an engineer with a South Melbourne firm and using his acquired knowledge he built what may have been a locomotive for use on the tramline. The "engine" was constructed from a 10 hp portable steam engine and

incorporated a winch for loading logs onto tramway trucks in the bush. It's main purpose was to haul the empty log trucks along the tramline to the log landing. Prior to constructing the machine Biggs stated his intention to build a locomotive for use on the line and several years later he was reported to be operating an engine between his Bloomfield mill and the station. This route was also traversed by a tramway which was known to have been in use at the time. Whether the machine ran on the rails or was a traction engine is unknown and at this time the question remains unanswered. Biggs worked the mill until 1890 when it closed down due to the poor price for timber that prevailed at the time. The plant was cut up and disposed of in June 1894.

Biggs operated a second mill at Warragul for a short period in 1883. The mill was located on Lorenz's block to the north of the town but due to the poor timber in the area it was shifted to Bloomfield late that year. Biggs had proposed to connect this mill to the station with a tramway but he moved the plant before work could commence on the line.

Warragul Sawmill Company

In 1883 a consortium of Melbourne investors, led by Henry Hine, formed the Warragul Sawmill Company Ltd. and purchased the timber rights to John Walsh's selection 1½ miles south west of Warragul.

The mill was erected later that year and by December it was connected to the railway station by a 3ft gauge wooden railed tramway.

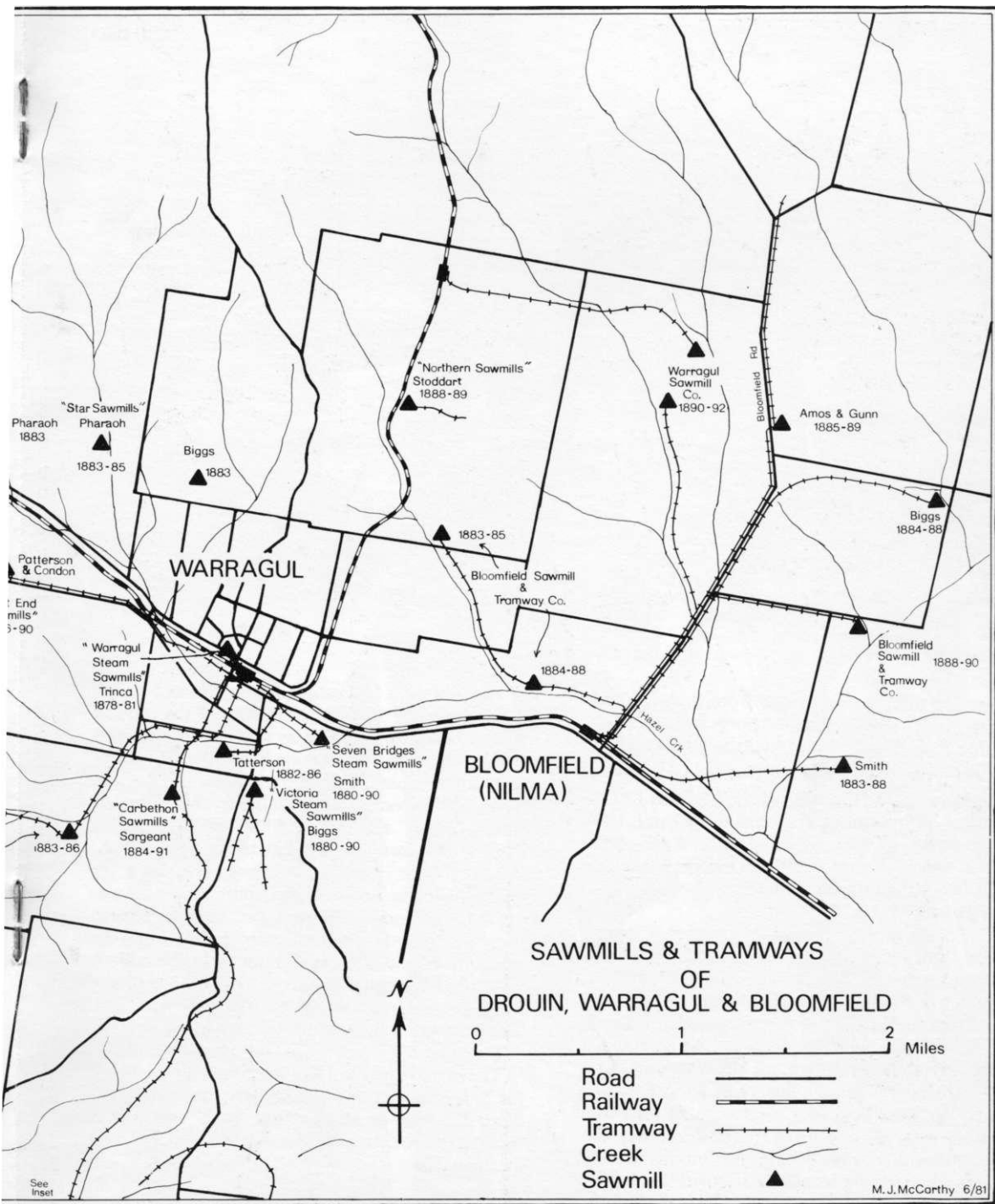
The plant was initially a fairly conventional arrangement powered by a 14 hp portable engine. In October 1885 the Company installed the Canadian Waterous Patent Sawmill which was to make the mill perhaps the most up to date in the colony. The introduction of the Waterous Plant was one of the earliest examples of automation in the industry whereby the entire operation of breaking down a log could be controlled by one man as compared with the normal situation where several were needed.

A log tramway was constructed to the east in 1885 and in June 1886 the mill was shifted along this line to a site on Sam Brookers property. A



Warragul Sawmilling Company's tramway c. 1885







Sargeant's Carbethon sawmill c. 1885

further log tram was extended from this mill into Phillip Nind's selection to the north in June 1887 but due to a dispute with Nind the tramway was only used for about five months.

In May 1890 Hine shifted the plant to Lillico, north of Warragul. It operated there until 1892 when owing to the continued poor state of the market the mill was closed down and the Company went into voluntary liquidation.

Sargeant

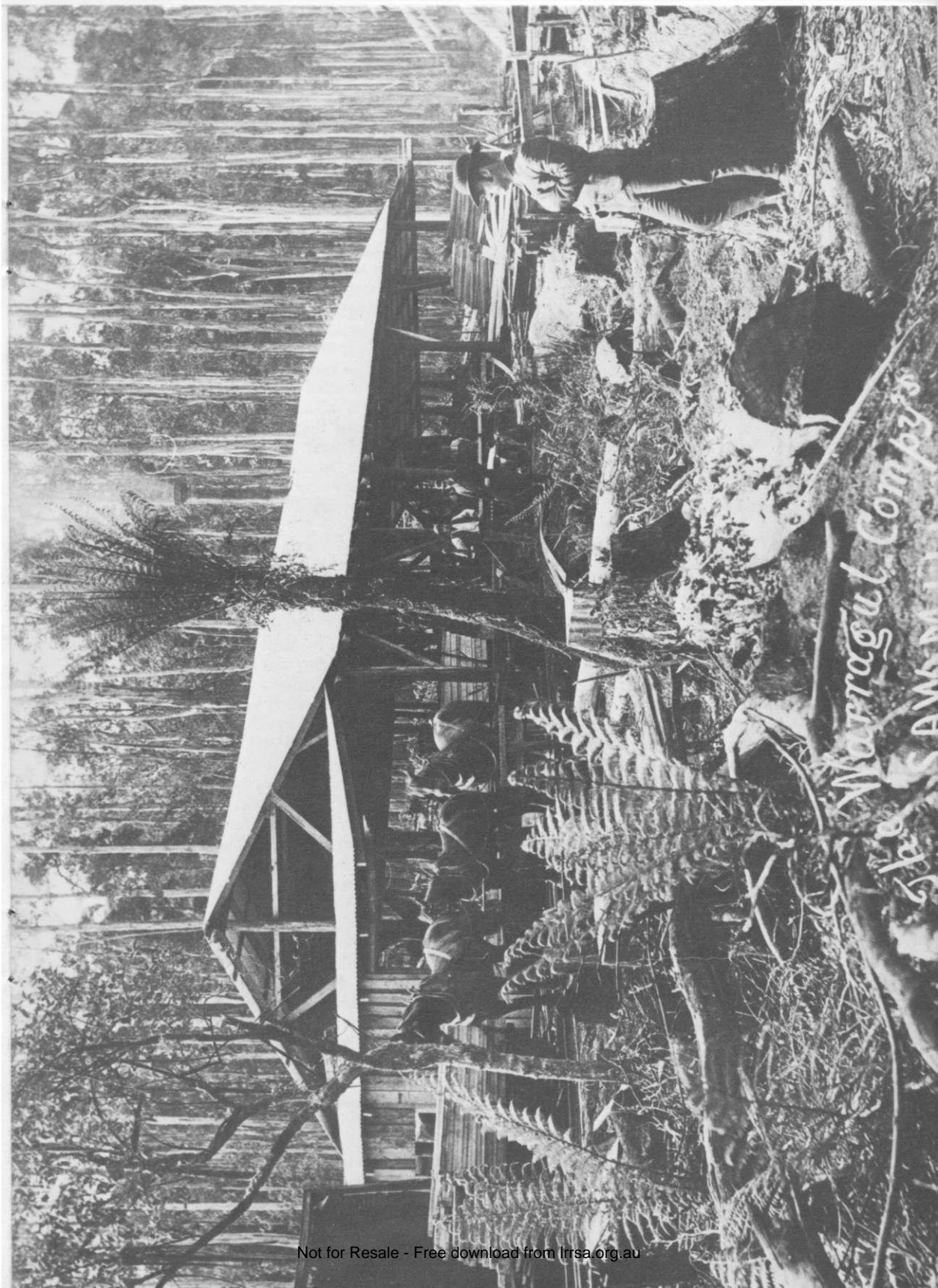
One of the more prominent men about Warragul in the 1880's was Charles Sargeant. Justice of the Peace, Licensing Magistrate, Shire Councillor, Member of Parliament and a pioneer of Northern Queensland, Sargeant was a very active man. In 1874, with his wife and brother, he selected a timbered allotment close to the site where the town of Warragul was to be a few years later. Clearing thickly forested land to a state suitable for cattle grazing was an expensive proposition but the solution to the problem became obvious in the early 1880's when the unprecedented demand for timber in Melbourne led to the establishment of many mills around Warragul. In 1884 Sargeant took advantage

of this situation and established a sawmill on his wife's property about a mile south of the railway station. Sargeant, trading as Carbethon Sawmills laid a tramway connecting with the Warragul Sawmill Company's tramway about a 1/2 mile from his mill. The connection with the rival Company's tramway was severed in 1885 when Sargeant extended his own line right into the station yard. At the same time construction commenced on a log tramway to the south of the mill. This line was gradually extended as Sargeant cut through his own property and others to the south until by 1889 the tramway extended some 3 miles from the mill.

In 1891 the mill was moved to a new site on the Minnieburn Creek six miles south of Warragul. The tramway was extended through to the new site and several log trams were laid from the mill.

The period 1891 to 1893 was a very difficult time for Sargeant, the shortage of orders forced him to work the mill on a part time basis and it was reported more than once that the firm was operating at a loss.

Opposite page: Warragul Sawmilling Company's mill c. 1885



Warragul Company
Glad
AW

In 1894 following an improvement in timber prices, Sargeant combined his sawmilling assets at Warragul and Mirboo with those of his brother-in-law, Ernest Jones, to form C. Sargeant & Company Ltd. The mill remained in operation at Minnieburn operating under this name until November 1895 when it was shifted 20 miles north of Warragul to Neerim where it worked until 1902.

Patterson and Condon

In 1886 William and Alex Patterson, who had formerly been milling on property to the east of Drouin, formed a partnership with a man called Condon to establish the West End Sawmills on Henry Hamilton's property, 2 miles west of Warragul.

The mill was powered by a 10 hp Robey portable engine and employed about 17 men. It was connected to the station by a wooden railed tramway constructed during the months of August and September 1886.

The West End Sawmill operated on Hamilton's property until 1890 when it closed due to the depressed market conditions.

Tatterson

Edwin Tatterson erected a small firewood mill on his own 8 acre block opposite the present site of the West Gippsland Hospital in 1882. The plant was expanded in 1884 when Tatterson commenced cutting scantling timber. Most of his produce was sold on the Melbourne market so to facilitate the transport of the timber to the station he laid a tramway from his mill in 1884.

He worked this site for only another 2 years as in 1886 he shifted to Darlimurla and traded under the name of Darlimurla Steam Sawmills.

Stoddart

The Northern Sawmills were established in 1888 by Isaac Stoddart on his own property a couple of miles north of Warragul. Little is known of Stoddart's operation other than it made use of a log tramway and was sited on the surveyed route of the Neerim Railway. It is believed that Stoddart was paid substantial compensation when the railway was put through in 1889. The mill, appears to have ceased operating at that time.

Pharoah

The Star Sawmill was a water powered plant erected by George Pharoah on his own property 2 miles north west of Warragul. The mill operated between 1883 and 1885 but little else is known of it. Timber was sent by road to the station where Pharoah maintained a running battle with the local railway officials over the lack of tracks to carry his output to Melbourne. It is not known whether or not

log tramways were used at the mill but considering the local terrain it appears likely that they were.

The Bloomfield District (Nilma)

Bloomfield or Nilma as it is now known is situated 3 miles to the east of Warragul. Like Warragul and Drouin the area around Bloomfield was thickly timbered but most of the good stands lay to the north of the town.

George Brothers

The first sawmill to be established in this area was that of John and Butler George. In March 1883 the George brothers moved one of their mills from Drouin and erected it on the property of James Copeland, 1½ miles north of Warragul Railway Station. Initially they despatched their timber by road into Warragul but the impassable roads in winter led to a decision to lay a tramway. Routes were surveyed to both Warragul and Bloomfield Stations and eventually the Bloomfield alternative was adopted.

The tramway was laid in September 1883 but it terminated at the Hazel Creek about a quarter of a mile from the station. At this time the goods siding at Bloomfield was on the south side of the line making it necessary to transfer the timber onto road vehicles to cross the railway and enter the goods yard. A timber siding was laid on the north side of the line in 1884 and following this the tramway was extended into the station yard.

The George's second mill at Drouin was shifted to Bloomfield in 1884 and sited on the tramway midway between the first mill (No. 1 mill) and the station. In December 1884 the Bloomfield Sawmill and Tramway Company was formed to take over the assets of the George Brothers. Butler George became the first manager of the Company and one of its main shareholders but John left the sawmilling business altogether and concentrated on managing the family's farming interests.

In June 1885 the No. 1 mill was moved to a new site, 1½ miles north of Bloomfield, on the property owned by John Moffat.

A tramway was laid branching from the original line on the Bloomfield Road to connect with this mill. The Moffat's Forest Mill, as it was known, worked this site for only 18 months before it was destroyed by fire on 22nd December 1886. It was not rebuilt.

Perhaps fortunately for Butler George, two months before the fire, he sold his interest in the Company to the other shareholders, Strang, Noble and Young. He couldn't have timed his departure more perfectly as the firm went into rapid decline from that time.

In 1888 the No. 2 mill was moved to a new site about a mile north of the station and a tramway was laid from the old Moffat's Forest line to serve the mill.

On 7th May 1889 the plant was formally opened with great pomp and ceremony but the mill was to see very little use. Competition from Tasmanian and New Zealand timber during 1889 resulted in very low prices on the Melbourne market. Because of this the mill only worked spasmodically during the year and finally in May 1890 the Company closed down the mill and went into voluntary liquidation.

Smith

The BS&T Coy was by far the largest concern to work the forest around Bloomfield but there were also several other smaller mills working in the area. In 1883 Joseph Smith moved his mill from Warragul and resited it on the selection of R.W. Judd, a little over a mile north east of Bloomfield. At first Smith hauled his timber over roads to the town but in 1885 following a particularly wet winter he laid a tramway to the station and continued to work this until 1888 when he shifted the mill to Ellinbank five miles to the south.

Biggs

A.E. Biggs was the owner of another of the smaller mills at Bloomfield. In 1884 he shifted one of his mills from Warragul and placed it on Jack Ellis' property about two miles north of the town. A tramway was laid to the station soon after establishing the mill and it is interesting to note that in August 1885 the *Warragul Guardian* reported that Biggs was using an engine to haul his timber to the station. This was possibly the same machine that was built by his son, Edwin, for use at the Warragul mill in 1881.

Biggs' mill was burnt down in November 1885 but was reconstructed soon after and by July the following year the plant was back in action. The mill was closed down in 1888 when Biggs retired to his farm north of Warragul.

Amos and Gunn

William Watkins Gunn and William Amos formed a partnership in 1885 and put a mill onto Amos' property three miles north of Bloomfield. A tramway was laid to connect the mill with the George brothers newly constructed Moffat's Forest line about 2 miles south along Bloomfield Road. Another tramway, presumably a log line, was laid to the north of the mill along Bloomfield Road to the property of J. Hall.

Amos and Gunn operated here until 1889 when they moved to Gainsborough, about nine miles to the south east of Bloomfield.

Today little evidence remains of the tramways that once operated in this part of Gippsland. The forests disappeared long ago and few vestiges remain although occasional tree ferns in deep gullies and ancient looking tree stumps in forgotten corners of paddocks bare witness to the original vegetation. Formations can still be seen in the vicinity of the Drouin South quarry particularly along the alignment of Walton's broad gauge line but other than this there is nothing.

Acknowledgements

The writer wishes to express his gratitude to the Warragul Historical Society for allowing access to early Warragul Shire records and to the staff of the Buln Buln Shire for permitting access to that Shire's early archives.

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Warragul Guardian 1879-1922

South Gippsland Express 1884-1919

West Gippsland Gazette 1898-1905

Warragul News 1887-1894

Gippsland Independent 1879-1922

Other sources:-

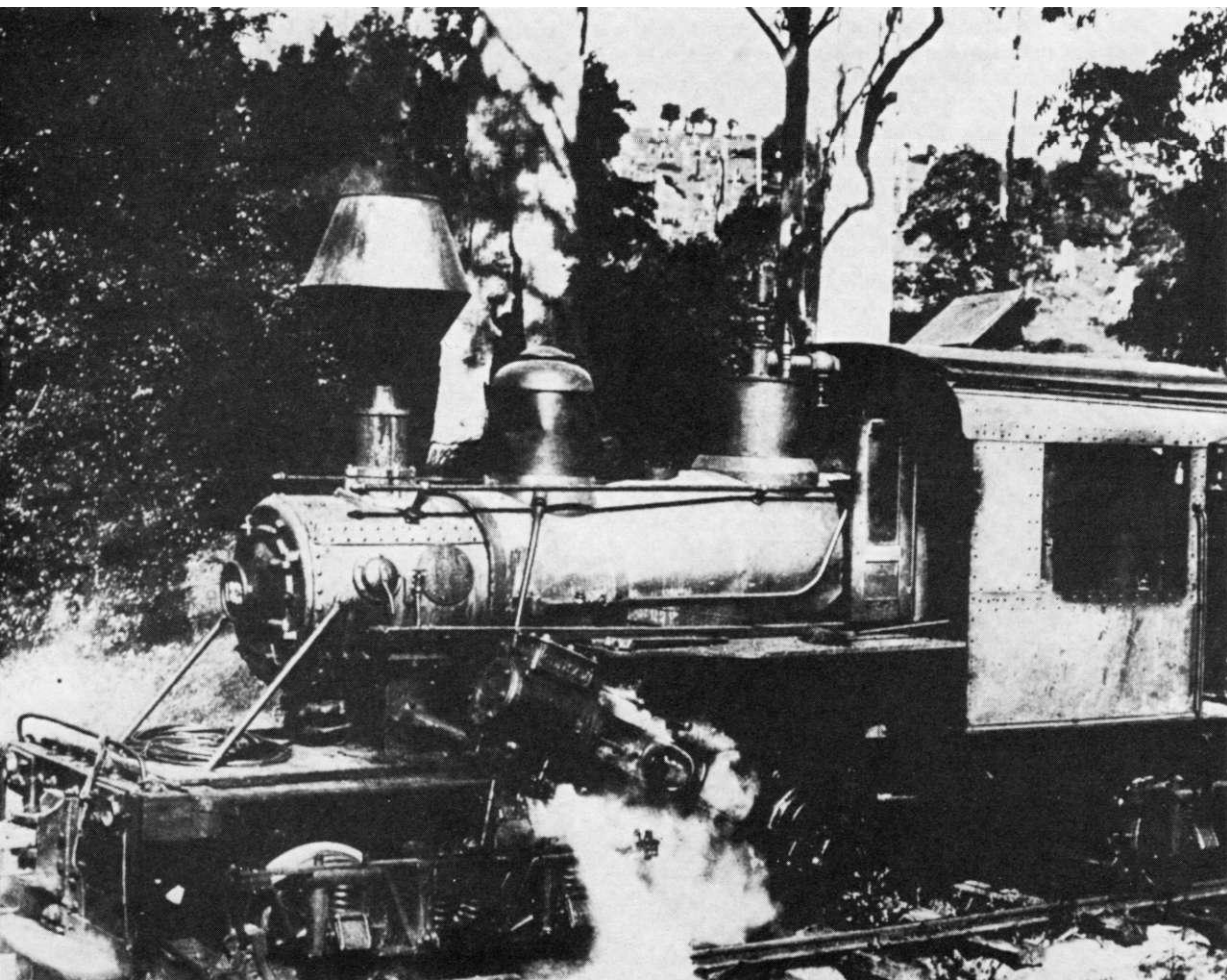
Warragul Shire records

Buln Buln Shire records

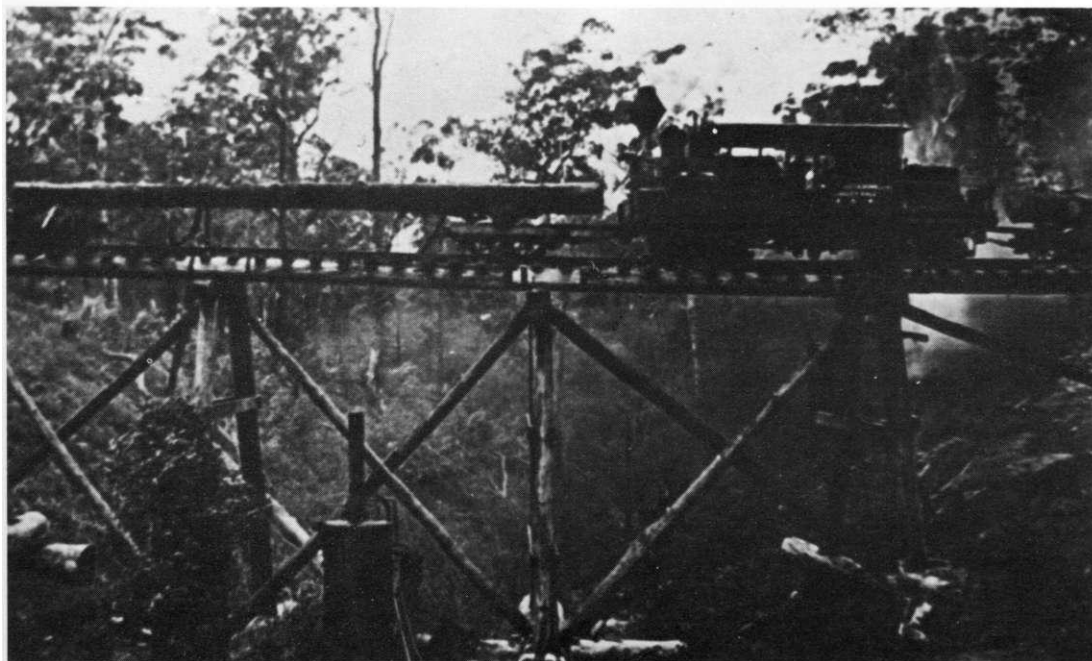
Land Files held at Public Records Office

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Photo Section



"B"-class Climax locomotive (B/N 1375 of 1916) on Longworth Ltd 10-mile standard gauge timber tramway, Kendall, NSW c1924
FM Bailey, Forestry Commission of NSW



"A"-class Climax locomotive on bridge at Langleyvale, NSW. This 13-mile line operated between 1913 and 1941 when the locomotive went to the Circular Head Amalgamated Timber Coy, Tasmania

John Kramer collection



Langley Bros Climax locomotive descending 1 in 50 grade with log train. Note the brakeman applying the brakes on the forward 'sets' while the locomotive coasts downhill in neutral.

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Shay locomotive with train at Canungra, Queensland

Department of Forestry, Queensland



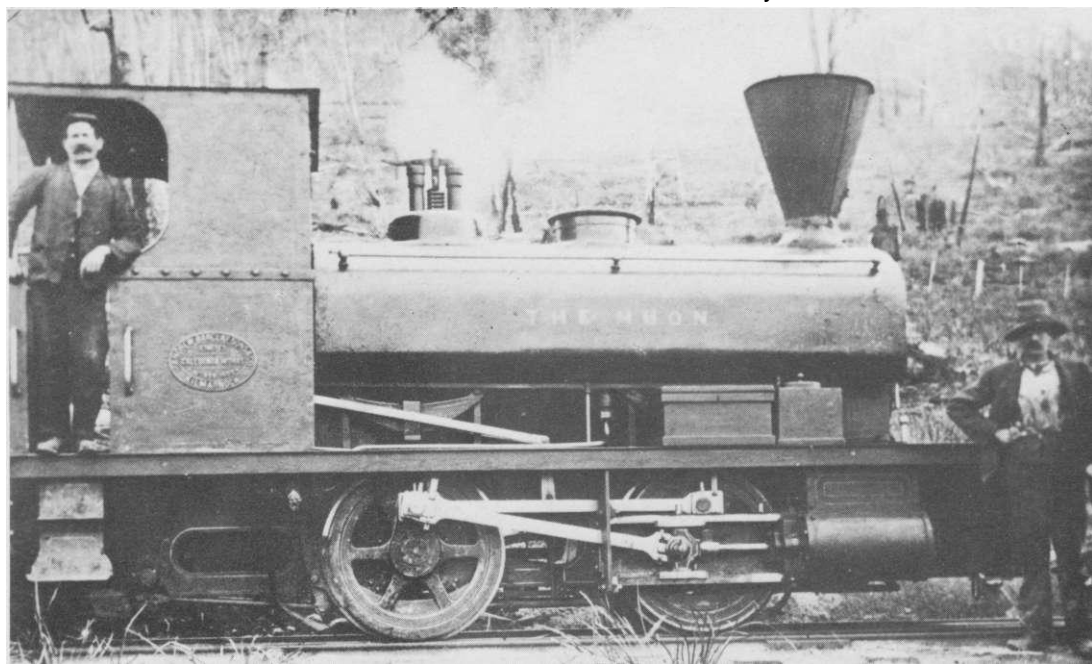
Logging train on Frazer Island, Queensland

Department of Forestry, Queensland



Log train in the Geeveston Forest hauled by The Huon.

Forestry Commission. Tasmania



The Huon Andrew Barclay 0-4-0ST 959 of 1902.

Forestry Commission, Tasmania



Loading logs in the Geeveston Forest.

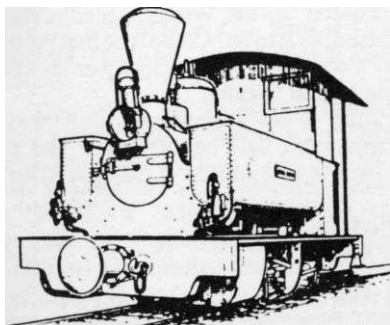
Forestry Commission, Tasmania

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One of the Huon Timber Coy A-class Shay locomotives and a vertical boilered log hauler.

Forestry Commission, Tasmania



LETTERS

Nattrass Rail Tractors, LR.70

I have been interested in the Nattrass Rail Tractors for a number of years. There is a reference that one went to Australia, but I had no idea where it went and the *Light Railways* article has filled a

gap in my research.

The story of Nattrass tractors as I know it is as follows:

The tractors were designed by Howard Nattrass, a motor expert of Wellington who took out patent No. 53442 for improved self propelled hauling

units in November 1924. The original patent states that:

'The object of the invention is to provide means, whereby the tractive power, or hauling abilities of such units may be increased in a comparatively simple and inexpensive manner, so as to render the hauling units more efficient'

The Company was Rail Tractors Ltd which was registered as a private company on 9 November 1925 with its office at 8 Holland Street, Wellington. Capital was £20,000 and the subscribers were Mr CD. Wilson of Napier and W.H. Martindale of Lyall Bay, Wellington. The tractors were actually built by Julian Grove of 8 Holland Street, Wellington.

The prototype tractor was tested at G. Campbell's mill at Akatarawa in late 1924. This was of the Fordson type and appears to be the one depicted

on page 12 of *LR. 70*. Another tractor fitted with an 8-cylinder "V" Cadillac 36 hp engine was tested in the Wellington railway goods yard on 25 September 1925. I enclose a photograph of this tractor at the Pukeweka Sawmilling Coy's tramway at Manunui in 1925.

I have reference to Nattrass tractors working at the following mills, but whether some were just test runs I cannot say for certain:

G. Campbell, Akatarawa Valley
Gibbs & Company, Utiku
Crighton's, Pokaka
A & R Wallis, West Coast, South Island
Pukeweka Sawmilling Company, Manunui
Managwhero Sawmilling Company, Raetihi
Mitchell & Cook, Mataroa (Rangataua Timber Coy.)
Manakau Sawmilling Company
Taringamutu Timber Company
I hope this may be of interest.

Alan Bellamy Tauranga, New Zealand

The excellent account of the Nattrass patent logging tractors in *LR. 70* brought to mind a photograph of a similar unit on page 34 of *Light Railways* No. 64 working in Tasmania. On examination of both photographs it would appear that the tractors are identical differing only in the sanding gear.

The question I raise, is the tractor depicted in the Tasmanian photograph a 'Nattrass' patent tractor or is it a 'Fenton' as the Winter's Studio photo catalogue describes it to be? Could it be that the unit is a Nattrass tractor sold by a company or importer in Tasmania named 'Fenton'?

Perhaps some of our Tasmanian members may be able to shed some light on this matter and also verify that the scene is indeed at Salmon River.

Paul Simpson. Panania, NSW.

Ed. The Rhodes Timber Company's Mount George logging tramway on the Manning River in NSW is reported to have introduced two Nattrass tractors in the late 1920s (Ref. *ARHS Bulletin* No. 282, April 1961).



Nattrass tractor with Cadillac engine on test run at Pukeweka Sawmilling Coy, Manunui, NZ 1928.

AN AUSTRALIAN DIESEL MINES LOCOMOTIVE LR 72

It would appear that an additional ten 0-6-0DM locomotives identical to those mentioned by Ted



'Fenton' log tractor, at Salmon River, Tasmania

Winters Studios, Burnie

Stuckey were built by Malcolm Moore Ltd. for Australian Iron & Steel Ltd. around 1950. These apparently were for use at Nebo and Kemira Collieries.

In constructing all 16 units, Malcolm Moore utilised powerplants imported from Great Britain through the Drewry Car Company of London. These powerplants were allocated Drewry numbers 2211-2216, 2336-2344 & 2390. They probably comprised engine, gearbox and jackshaft plus the necessary auxiliaries and possibly a complete set of controls and instruments, with Malcolm Moore supplying chassis, driving wheels and superstructure.

It seems that some of these locomotives are still in use at A.I. & S. collieries, and any reports of them would be welcome for inclusion in *Light Railway News*.

Further references to these locomotives can be found in:

Electrical Engineer & Merchandiser February 1949.

Commonwealth Engineer July 1949.

Railway Transportation November 1951.

THE LAST WORKING ON THE IRVINE-BANK & STANNARY HILLS TRAMWAY LR72

A typographical error seems to have crept in to this item, where the last locomotive to work on the tramway was shown as being built by Borsig, instead of Borsig. The major alteration to the locomotive at Cattle Creek was its conversion to a tank engine. Thus one wonders if the tender accompanied the locomotive to the mill at Finch Hatton. I understand that the Borsig was donated to ANGRMS in 1971. It is currently stored at the museum of the Brisbane Tramway Museum Society at Ferny Grove (not Ferney).

MARSDEN MUSEUM OF HISTORIC ENGINES - GOULBURN STEAM MUSEUM LR 69 & 72

In Ken McCarthy's additional notes published in LR 72, "Central Isis Mills" should read "Isis Central Mill." The Racecourse Mill 4-6-0T is builder's number 45215. "Quanaba Mill" should read "Qunaba Mill".

John Browning
Taringa, Qld.

KERR STUART NOS 743 & 797 LR 73

To add further confusion to the debate on these locomotives there are conflicting accounts as to where one of these locos worked at Broken Hill.

C.C. Singleton, in his Bulletin article (No. 295, May 1962, p. 74) describes a Kerr Stuart and Orenstein & Koppel loco at the Junction Mine. In a later section (p.100) he mentions a 2 ft gauge tramway connecting the Junction North Mine with the Block 14 Mine and ore heaps.

A brief reference in a Department of Mines Annual Report (1911, pp.97, 98) describes a 2 ft gauge railway about 2 miles long, with 27 cut ft. capacity trucks and a locomotive of 50 hp at the Junction North Mine. I assume the 50 hp loco was Orenstein & Koppel 0-4-0T 5022 of 1911. This also tallies with a map published in the *Proceedings of the Australasian Institute of Mining & Metallurgy* (New Series No. 87) dated 1932 showing a tramway connecting the Block 14 Mine with the Junction North Mine.

It appears that the O&K locomotive and the Kerr Stuart (if it worked at Broken Hill at all) were in the service of the Junction North Mine rather than the Junction Mine.

Tony Weston
Mount Isa, Queensland

MOSA MILL TRAMWAY, PAPUA NEW GUINEA LR 69

As a follow-up to the article on the tramway system at Mosa mill the following tramways are currently operated by oil palm mills in the South Pacific:

New Britain Palm Oil Development, Mosa still has a tractor operated system as described in LR.69.

Hargy Oil Palms Pty. Ltd., Biala has 150m of track with a locomotive to push the sterilizer cages. **Higaturu Processing Pty. Ltd.**, Popondetta has a short "U" line from the bins to the sterilizer. Hoppers are pushed by tractors and are removed from the sterilizers by winches.

Solomon Islands Plantation Ltd., Guadalcanal, Solomon Islands has the same system as at Higaturu.

Michael Pearson
Buka Passage, PNG.

Whilst every effort is made to ensure the accuracy of articles published in *Light Railways* errors may creep in. Additional information is being discovered all the time, and this sometimes contradicts previous information.

If you see any errors, or can add information, please contact the editor, and so help us to record the full history of Australia's light railways.

Historical references to sums of money in *Light Railways* are in Australian pounds (£). One pound equalled two dollars on changing to decimal currency in 1966.

Articles and news items are always welcome. It greatly assists the editors if they are typed or written on one side of the paper only and double spaced.

Back Cover: One of the first major research projects to appear in *Light Railways* was Mark Plummer's article on the 'Tramways of the Forrest-Barwon Downs Area' which appeared in Issue No.18, Summer 1966. It sparked off a long debate over the origin of W.R.Henry's small 0-4-0 well tank locomotive. The most authoritative statement to date comes from Richard Horne (LR.62) who identifies the locomotive as Beyer Peacock 3057 of 1889 which was originally built as a 2ft 9in gauge tram and converted to 3ft 6in gauge at Wallaroo by Moonta Mining and Smelting Coy in 1894. The photograph depicts the 0-4-0 WT on Henry's tramway.

Forests Commission of Victoria

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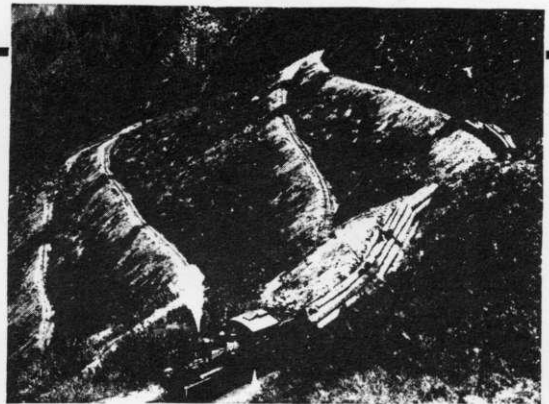
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