LIGHT RAILWAYS

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Markwell Timber Tramway
Powelltown Walk
Williamsford Haulage

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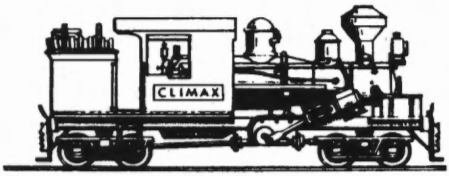
The Light Railway Research Society of Australia Inc.



Light Railway Research Society of Australia Inc.

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Melbourne: Second Thursday, every second month at 8.00 pm, Uniting Church Hall, Ashburn Grove, Ashburton.

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Subscriptions: $32.00 per year covering 4 issues Light Railways, 6 issues Light Railway News and information on Society activities, publications, etc. Airmail rates on application. To Membership Officer, PO Box 21, Surrey Hills, Vic 3127.

Sales: Back numbers Light Railways and other publications from LRRSA Sales, 6 Chalmers Grove, Upper Ferntree Gully, Vic 3156. Phone (03) 9758 7516.

Cover Photo:

Fairymead Sugar Mill No 1 loco in pristine condition. See LR 123. Photograph believed to be the work of an English professional named Abrahams. Negative via Brian Callan Collection per Jim Smith. Print submitted by Bruce Belbin.

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Light Railways Editor: Norm Houghton, PO Box 1128, Geelong 3220. Phone (052) 21 7007 or Home (052) 29 4805. Articles, photographs and letters welcome.

The Light Railway Research Society of Australia was formed in 1961 and caters for those interested in all facets of industrial railways in this country and its off-shore territories, past and present.

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

Who knows what lies hidden in the forest? Members have uncovered tramway formations, sawmill sites, winches, steam boilers, bridges, log landings and more. The Society has been instrumental in preserving many sites through Heritage Classification so that future generations can enjoy glimpses of the past.

CONVERSIONS:

1 inch (in)	25.40 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metres
1 mile	1.60 kilometres
1 super foot	0.00236 cubic metre
1 ton	1.01 tonnes
1 pound (£)	$2.00 (in 1966)
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts

THE MARKWELL TIMBER TRAMWAY

by Ian McNeil

INTRODUCTION

In the history of the timber industry of the mid north coast of NSW, the short-lived Markwell timber tramway has barely rated a mention. Even to light railway enthusiasts it was just another small, log line, operated only by horse power. Yet it is not without interest, as it is hoped that the following history will show.

The Markwell tramway was the ambitious brainchild of a local timber pioneer, and was planned to be the first stage of an extensive network of log lines into the virgin forests east of Bulahdelah. It was a standard gauge line, and was surveyed and built to a high standard not often found on timber tramways. For a while both sawmill and tramway were part of Allen Taylor's hardwood timber empire. Had it not been for World War 1, the planned extensions and part conversion to steam may well have seen it achieve a degree of fame similar to Allen Taylor's better known Wootton to Meyer's Point steam tramway.

Frederick Phillips[1] was one of the pioneers of the timber industry on the mid-North Coast of NSW. He was born in 1865 in Yorkshire, England, the son of a poor farmer. He soon showed the initiative and drive that was to characterise all his later achievements. He set his heart upon becoming a carpenter but he could not raise the needed money to become apprenticed in the trade. A friend told him of the opportunities opening up in the Australian Colonies and he decided to try and better himself there. As wages in England were so low, it took him over two years to save the £15 15s fare to Australia. Finally in 1882, at the age of 17, he sailed on the *SS Garonne* for Sydney.

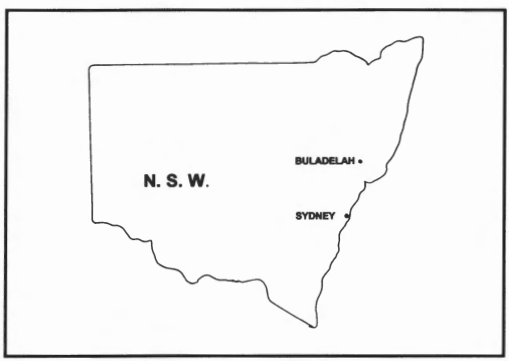
Arriving in Sydney he immediately found work, at four times the wage he had been getting in England. Within six months he got the carpentry apprenticeship he wanted and, after several years of hard work, had become an expert carpenter and joiner.

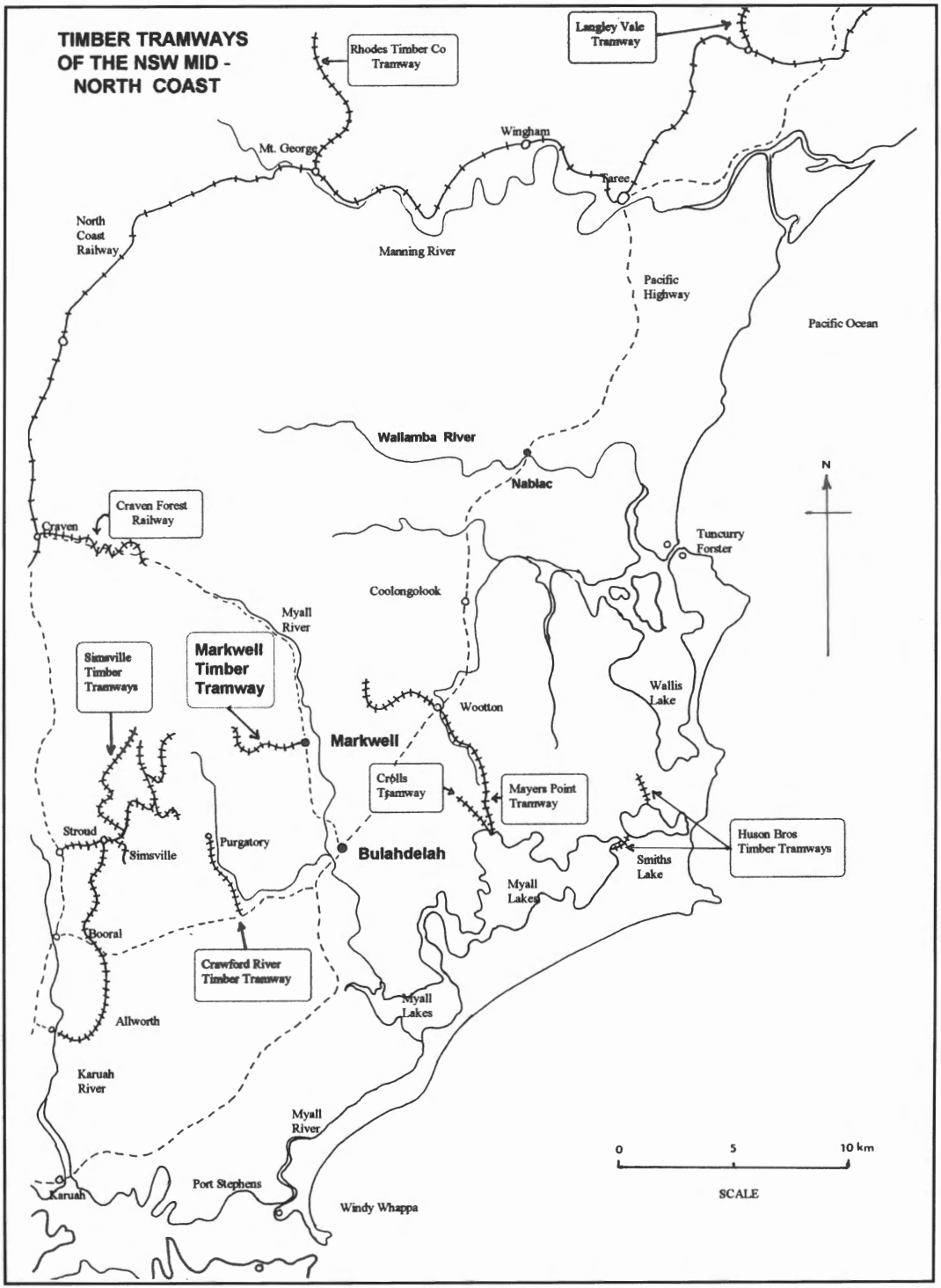
In the early 1890's there was considerable industrial unrest in Sydney, and the building trade suffered quite badly. By this time Frederick Phillips had family responsibilities, so he decided to move to the country where things were not so bad. He obtained work in a sawmill at Nabiac and, using his early farming experience, built up a first-class dairy farm and apiary. He was the first in the district to practice ensilage – putting winter feed for cattle in storage pits – which increased the financial return from his dairy herd.

In 1901 he took the opportunity to purchase a run-down sawmill at Bullock Wharf on the Wallamba River, near the present-day Nabiac.[2]

He was successful in repairing it and putting the business back on its feet, and he began to expand his scope of operations. At Bullock Wharf he built his own house and also a company store for his mill hands – "The Red Store" – which featured the first full-sized glazed windows in the district. In 1903 Frederick Phillips purchased the sailing ship *Candidate* to ship his timber to Newcastle and Sydney. The *Candidate* was a wooden two-masted ketch, 88 feet long and weighing 86 tons, and was built in 1885 at Terrigal, NSW. Unladen her draught was only 6.4 feet, which meant that she could be taken up many of the shallow mid North Coast rivers.[3]

It was during this time that he struck up a firm friendship with Allen (later Sir Allen) Taylor, future chairman of the famous Allen Taylor & Company hardwood empire. Initially Phillips was one of a number of North Coast sawmillers supplying Taylors with hardwood timber for their customers. Allen Taylor built his reputation and his empire on quality and punctuality of supply. He insisted that timber be delivered to him on time – quite unusual in those days of hazardous river mouths and uncertain shipping schedules. Frederick Phillips' record of punctuality impressed him, and as that company's Port Stephens business interests began to expand, he was often a guest at Phillips' house during his regular tours of inspection.





A horse team posed on the Markwell tramway with saw logs for the sawmill. This photo was taken from the downhill end of "The Camber", the 180 degree curved bridge 5.5 km out from the mill. There is a second horse-team just visible behind the first. Photo: Bulahdelah Historical Society per Roger Persson.

The old steam punt *Wallamba,* which came with the mill, steadily became more unseaworthy so, with the help of just his own mill hands, he built a replacement from scratch in 1904. With the help of a loan from Allen Taylor a new steam engine and boiler were ordered from the firm of Begg and Grieg. The new punt was used to bring logs to the mill from various loading points along the Wallamba River. It had a capacity of 38,000 feet of timber and was also used to take sawn timber, piles, girders and railway sleepers to the river mouth at Tuncurry. This enabled the *Candidate* to be loaded at the heads, instead of losing a lot of time each trip being towed up the Wallamba River to Nabiac.[4]

THE MOVE TO MARKWELL

By 1907 most of the best timber in the Wallamba River area had been cut out, and it was becoming expensive to obtain reliable supplies for the Bullock Wharf sawmill. At about the same time a large area of forested land to the west of Bulahdelah was thrown open for purchase and settlement. As Frederick Phillips explained to Allen Taylor in a letter written in the following year, the quality and quantity of timber in this district made a deep impression on him, and he decided to move:

> 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 horse and foot. I found there a virgin forest of timber held by the Government

Not all the grades were in favour of the load as this action photo on the Markwell Tramway shows. A six-horse team is working hard on one of the short uphill sections on the way back to the mill. This photo was probably taken about 800 metres from the mill. Photo: Bulahdelah Historical Society per the Late Ted Baker.

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) 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 . . .

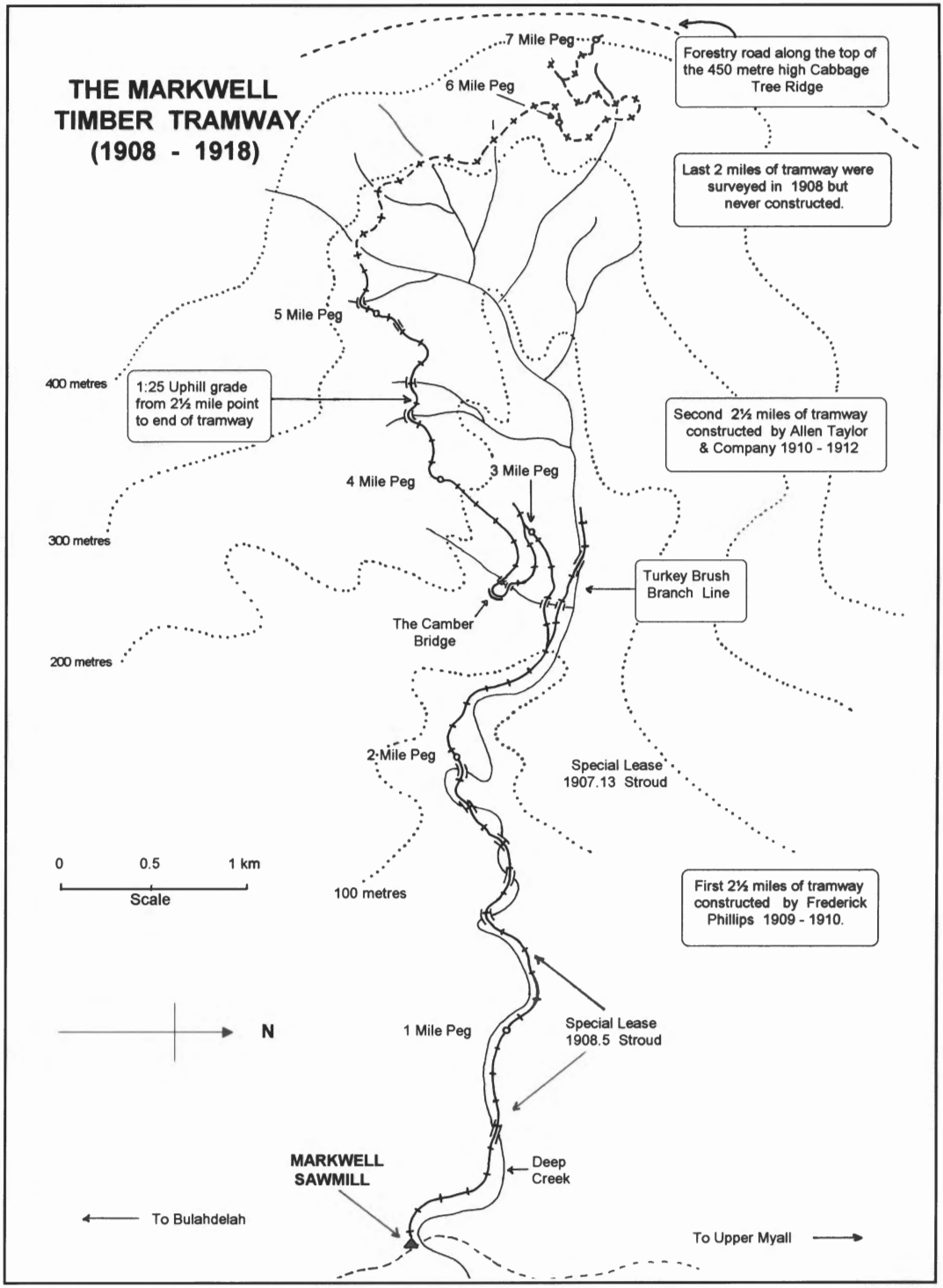
I am, gentlemen Yours faithfully,

Frederick Phillips.
Bulahdelah, 20.3.1908.

With financial backing from Allen Taylor he purchased a four hectare block of land from John Powers at Markwell, 11 kilometres north of Bulahdelah.[5]

He also purchased the sawmilling plant from Hudson Bros' Naranie sawmill at the northernmost tip of the Myall Lakes, and moved it to Markwell.[6]

The plant was re-erected on the south bank of Deep Creek, where the main road from Bulahdelah crossed over by means of a ford. Several cottages were built to house the mill workers, and a general store to supply their needs. The whole enterprise was known as "The Skipton Sawing and Planing Mills". In spite of the rather grandiose name, the mill was not a very large enterprise.



During the first year of operation, saw logs were drawn from the adjacent forest to the mill by bullock teams. A steam traction engine hauled the mill's output eight km down the Bulahdelah road to Cedar Wharf on the Upper Myall River. Here Phillips' steam punt took over for the long trip down river and through the Myall Lakes to deep water in Port Stephens. There it would tie up alongside the *Candidate* and the load transferred for the run down the coast to either Newcastle or Sydney.

THE HORSE TRAMWAY

Lease Application

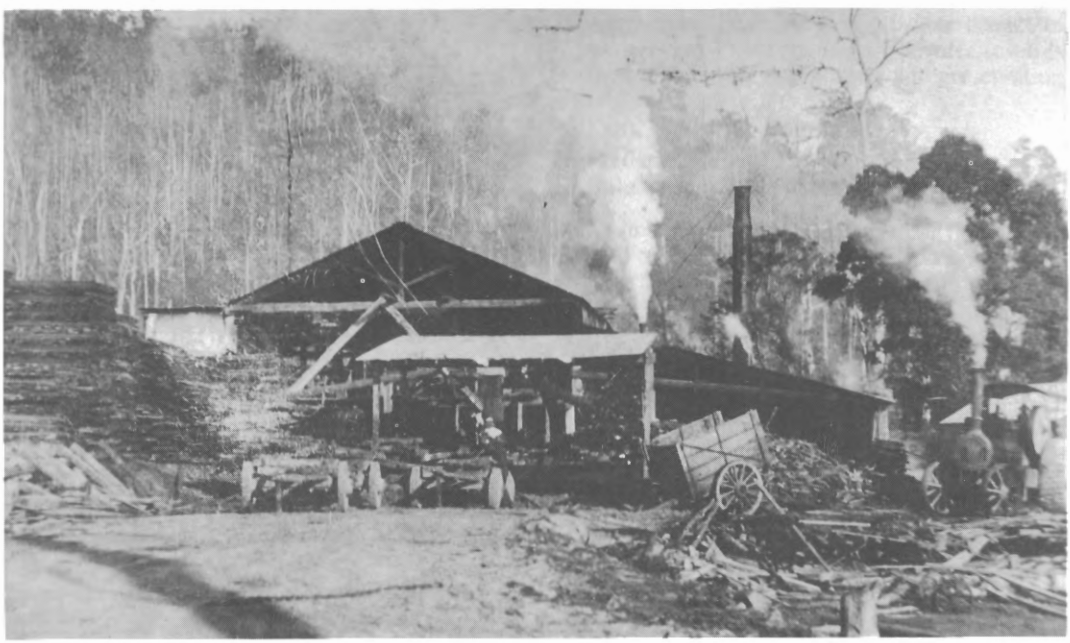
On 17 August 1907 Frederick Phillips applied to the Stroud Land Board for a Special Lease in order to construct a timber tramway into the forests surrounding the upper Crawford River. The initial application was for an eight km strip of Crown Land 50 links (10 metres) wide extending westwards up the valley of Deep Creek and linking up with Phillips' proposed timber tramway running northwards up the Crawford River.[7]

The Stroud Land Board duly granted Special Lease 1907.13 to Frederick Phillips on 25 March 1908. The lease covered 21 acres at a rental of £25 per year, for a 10 year period up to 31 December 1917. The Board imposed two conditions. Firstly, the tramway route was to be surveyed and pegged out within three months and a copy of the survey lodged with the East Maitland Lands Dept Office. Secondly, the tramway was to be constructed within two years.

Tramway Survey

Licensed surveyor Mr. H.O. Hargreaves was commissioned for the tramway survey. Starting at the Markwell mill site he and his team worked westwards up Deep Creek. Straight away they encountered a problem. The first miles of tramway had not been covered by Special Lease 1907.13. Frederick Phillips had intended to run this section along the south bank of Deep Creek through private property. Hargreaves found most of the south bank unsuitable due to steep hillsides coming right down to the water's edge, and recommended the easier north bank instead. However, as this traversed Crown Land, another Special Lease would be required. Thus Special Lease 1908.5 was applied for on 14 July 1908 and granted

The Markwell Sawmill in full swing circa 1912. The tramway terminated on the left in this photo, behind the stacks of sawn timber. It was on a higher level than the mill thus facilitating the unloading of logs. Deep Creek is to the left, and the photographer is probably standing on the main road to Bulahdelah.
Photo: Bulahdelah Historical Society per the Late Ted Baker.



Saw logs on the Markwell Tramway headed for the mill circa 1912. The width of the standard-gauge log bogies is clearly evident in this photograph. The location of this tramway junction is a mystery because the relatively even nature of the terrain in this photo does not match the rugged topography of the junctions identified so far. Photo: Bulahdelah Historical Society per the Late Ted Baker.

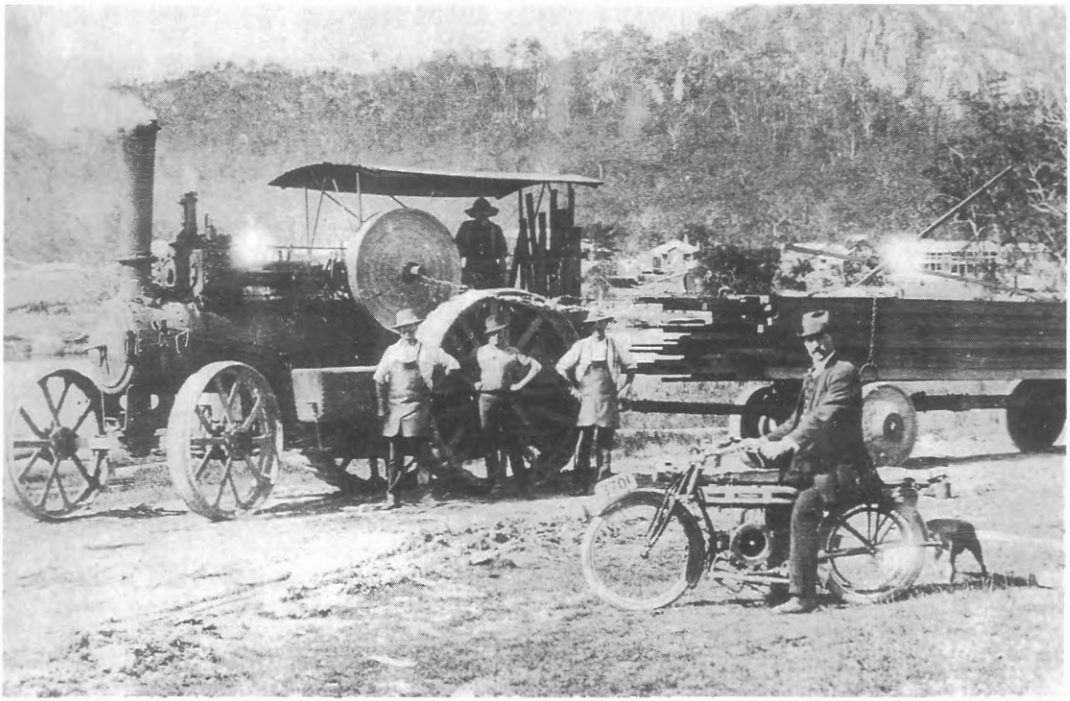
on 23 June 1909[8] giving permission to run the tramway from the mill site to the commencement of the original tramway lease, for an extra £4 per year. The survey and pegging out of the route was duly completed on 30 October 1908 and a copy lodged with the Lands Dept Office in East Maitland.[9]

It is fortunate that a copy of the survey has survived – being found in the roof of one of the old mill cottages at Markwell. It was drawn to a scale of two chains to the inch, and traces over seven miles of tramway, painstakingly marked out in classic arc-and-tangent form, every length is carefully annotated with distance, radius and compass bearing. It is quite clear that a considerable amount of work went into that survey.

The surveyed route closely followed Deep Creek upstream for the first three kilometres, heading due west. Route selection became more demanding after this point. To reach the summit of the main divide separating Deep Creek from the Crawford River, a climb of nearly 350 metres was necessary. Hargreaves opted to use a reversing station at the 3-mile peg, followed by a 180 degree curved bridge 800 metres further on, as part of the ridge climb. On an average uphill gradient of 1:25 the surveyed route then gradually swung from west to north then north-east as it climbed out of the amphitheatre formed by Deep Creek and its tributaries. At the 6-mile peg the route ran into very difficult terrain, calling for a 270 degree loop with two chain curves, another reversing station, and six bridges. The final point on the survey was the 7-mile peg, on a very steep hillside and still about 50 metres below the summit of the ridge. It was apparent that not only was the 21 acre Special Lease granted to Frederick Phillips quite inadequate to reach the Crawford River, but the expense of constructing it would be prohibitive. No further work on the survey was done past this point.

Construction

Frederick Phillips started tramway construction by mid-1909, working westward from the mill. The tramway was built as a wooden-railed 4ft 8½in standard gauge line, to suit the standard-gauge log bogies recovered from the Port Stephens Hard-



Allen Taylor's traction engine at Bulahdelah Wharf in 1912. The driver is Archie Brislane, standing are James Richards, Sylvester Power and Tom William. The pioneer motorcyclist is a Mr McDougall. This is believed to be the traction engine used to haul sawn timber from the Markwell sawmill.
Photo: Bulahdelah Historical Society per Roger Persson.

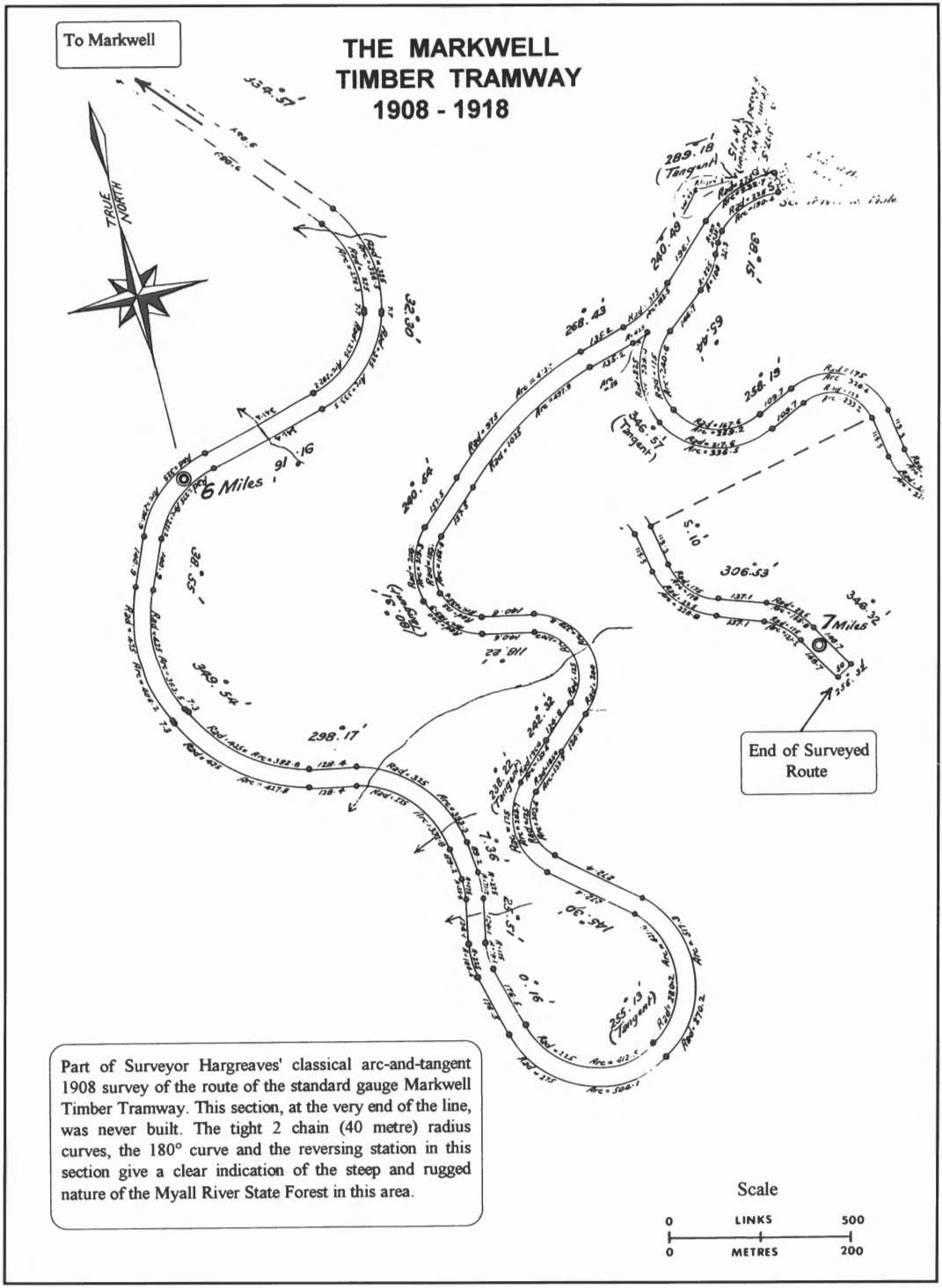
wood Company's steam tramway at Purgatory. At least some lengths of wooden rail were capped with iron strips to reduce wear.

For the first 1.5 km the tramway was high enough above Deep Creek to be out of reach of flood waters, and only minimal earthworks were needed. At this point the tramway crossed diagonally over to the north side of Deep Creek and began to closely follow it upstream. A succession of ledges, sidlings and narrow-walled cuttings carried the line two to three metres above water level. One of the features of this section were some lengthy cuttings with very narrow walls separating the tramway from the creek, offering a degree of protection from Deep Creek's periodic floods.

Parts of the lower Deep Creek valley are narrow, with steep hillsides and cliffs coming right down to the water's edge. The tramway had to cross from one side of the creek to the other to find a suitable path through this section. In all there were four creek crossings, each by means of 50-metre-long, 3-metre-high bridges. After the 2-mile peg the valley widened, enabling the line to follow a safer route away from flood waters. Earth works in this section were basically a succession of ledges and sidlings.

Although no record has survived as to how many men were employed on the tramway's construction, progress was apparently good. In November 1909 the *Raymond Terrace Examiner* reported that: "Mr. Phillips is making good progress with the tramline and logs may shortly be seen coming into the mill in double quick time".

In all Phillips constructed five km of tramway, but the last 800 metres deviated from the surveyed route. Instead of beginning the long climb up the ridge with fairly heavy earthworks and passing through thinly wooded stretches, he opted to carry the line further up Deep Creek into an area known as The Turkey Brush. Few earthworks were required here and for the last few hundred metres or so the line was laid almost directly on the bank of the creek. There was a short low-level bridge about halfway along which carried the line from



Part of Surveyor Hargreaves' classical arc-and-tangent 1908 survey of the route of the standard gauge Markwell Timber Tramway. This section, at the very end of the line, was never built. The tight 2 chain (40 metre) radius curves, the 180° curve and the reversing station in this section give a clear indication of the steep and rugged nature of the Myall River State Forest in this area.

the south bank over to the north where the terrain was more suitable. The terminus was sited where the creek valley had narrowed and begun to climb steeply, and where it was physically impossible to carry the line on any further. This line was later referred to as a branch line, and it appears that it was built without bothering the Lands Dept about permission to do so. Amendments were made later on, and in June 1910 Frederick Phillips' application for a Special Lease was gazetted to legalize it:

"1910.2 Frederick Phillips. County Gloucester, parish Myall. Commencing at a point on Special Lease 1907.13 for tramway by Frederick Phillips where it intersects the Turkey Brush Road and thence through Forest Reserve 28405 generally north westerly about 40 chains and approximately parallel with Deep Creek. 4 acres for tramway purposes.[10]"

THE ALLEN TAYLOR TAKEOVER

By 1910 Allen Taylor's policy towards their timber trade had changed. Markets for Australian hardwoods were booming, and there was also strong demand for wharf piles, bridge girders, railway sleepers and electric-light poles. Instead of continuing to rely on others to supply them with their timber needs, they began to purchase timber cutting and sawmilling operations outright. The Company already owned a sizeable fleet of coastal steamers and shallow-draught river steamers.

In the Port Stephens area Allen Taylor took steps to acquire the three existing timber tramlines plus the rights to construct several others. In late 1909[11] they bought out the Australian Timber Export Company, which had a small sawmill at Wootton and a 13-km wooden-railed tramway from there to Meyers Point on the shores of the Myall Lakes. This Company also held special leases to build timber tramways into the Purgatory forests west of Bulahdelah which were coveted by Allen Taylor. [See LR 129]

On 9th March 1910 Allen Taylor put a proposal to his Board of Directors[12] to buy out Frederick Phillips and thereby gain full control over the Markwell and Purgatory Forests. By this stage Frederick Phillips had been financed by Taylors to acquire tramway rights into large areas of forest to the east of Bulahdelah. As set out in the Company minute books, the proposal read as follows:

Allen Taylor & Co. Ltd. to take over F. Phillips Line and Mill (exclude store) at a valuation as under:

Mill at Markwell	
Line 3 miles	£2000
Horses and Gear (say)	£400
"Candidate"	£600
Traction Engine	£600
Freehold property cottages, etc. at Markwell	£300
Punt	£600
Goodwill say –	£1000

Note: Of this amount £7500 Phillips owes the Co. say £5000 which leaves say £2500 to be used out of New Funds.

To develop this place properly it will need expenditure as follows:

Extension of Deep Creek tram line to 5 mile peg – 2 miles	£2000
Plant and Gear	£1000
Horses and Gear	£1000
Extra Traction Engine and trucks to cope with extra work of haulage to deep water at Bulahdelah	£1200
	£5200
Cost of commencing Purgatory (to allow of extension later as per proposal No 1.)	
Re-constructing Purgatory Line and Box rails etc.	£2000
Constructing 2 miles line to Government road (exclusive of cost of rights)	£2000
Light Loco, trucks and gear	£2500
Horses and gear for snigging purposes	£1000
	£7500
TOTAL COST OF PROPOSAL (less amount owing by Phillips)	£15,000

In connection with the above proposal, it is intended to arrange for Mr. Phillips to manage the whole of the lines including the Wootton Brush Line at a salary per annum. If it were determined to proceed with Proposal No. 2 sleeper cutters could be commenced on Phillips line practically straight away and it is estimated that the other lines would be in full working order within about 9 months from the commencement of the work. It is fully expected that within 6 months we would be able to secure fairly large supplies of sleepers and piles.

Tramway Extension

Allen Taylor's proposal was accepted with no more than the usual grumbling from the Board

over his continual drain on capital expenditure and the need to be more cautious in their business dealings. On 28 June 1910 the purchase and handover was completed and Frederick Phillips became the Company's Port Stephens Superintendent of Operations.

Following the Allen Taylor takeover, a number of changes were made to the Markwell operations. Sleeper cutters were hired and put to work along the existing tramway, and soon large quantities of railway sleepers were being produced. The Company requested permission from Stroud Shire Council to erect a receiving shed and loading stage at Bulahdelah bridge, on the west side of the Myall River.

The main work however was the 3.2 km extension of the timber tramway to reach into the good quality timber on the upper slopes of Cabbage Tree Ridge, and work got underway in late 1910. The extension followed the route of the 1907 survey on a steadily climbing grade. The first 1.5 km consisted of a continuous ledge cut into the hillside, with much of the outer edge supported by long stretches of stone-built retaining walls. Halfway along this section, at the 3-mile peg, was the first reversing station which turned the tramway back due east as it gained height. A half-mile further on was the remarkable 180 degree curved bridge which formed the second reversing station. It was built on a tight two-chain-radius curve and, although it did span a shallow gully, its main purpose was to turn the tramway direction back to the west. The bridge was three metres high and 100 metres long, and was anchored at both ends by stone abutments. The uphill approach was the more impressive construction. A 50-metre-long curved approach embankment was built up from local rocks and reached a height of three metres at the bridge abutment. The remains are still an impressive sight, and are known locally as "The Camber".

Construction continued on for a further 1.5 km to the 5-mile peg. A succession of ledges, cuttings and bridges carried the tramway over tributary creeks and around intervening spurs off the main ridge. The tramway terminated on a relatively flat area just short of a tributary creek. Today this site is marked by the remains of a pair of abandoned log

A well-graded section of the Markwell tramway on the hill climb, about 5.5 km from the mill. Dry stone ledges, wooden sleepers, even super elevation, are well represented along this whole section. This photo was taken in 1990 after a bushfire had swept the formation clear. Following the tramway is not always this easy. Photo: Ian McNeil.

The top stone abutment of "The Camber" bridge. The approach embankment is on a very sharp curve nearly 40 metres long and built from local rocks. It is two metres high at the end. The wooden bridge continued on the same sharp radius, curving away to the left of the photo. Photo: Ian McNeil.

bogies. In spite of extensive searching through the thick forest further along the surveyed route of the tramway, no further traces of construction have been found.

There is only one anecdote about operations on the tramway that has survived the passage of years, and that concerns an accident. Apparently a load of timber on the way back to the mill got away from the driver and went speeding down the hill towards Deep Creek. It derailed on a bridge, and dragged the unfortunate horses over the edge with it. There is in fact a bridge site at the bottom of the last hill where where some damaged wheel sets may be seen in the creek bed below.

Frederick Phillips' Resignation

Contrary to expectations, the operations at Markwell were unprofitable, and a loss of £800 was recorded for the first 18 months. Compounding this loss was the disappearance of the *Candidate* after she sailed from Camden Haven, fully loaded with timber, on 14 July 1912.[13]

She was presumed to have sunk with all hands in the storm which lashed the North Coast at that time. Losses were not to Sir Allen Taylor's liking; his well-honed business sense, above all else, demanded profit from every investment. It began to appear that although Frederick Phillips was a successful and innovative sawmill manager, he was less successful in the more demanding role as Taylor's Superintendent of the widespread Port Stephens operations. Further losses were recorded when a large number of timber piles bought by Phillips to fill a Melbourne wharf construction contract were rejected as unsuitable.

The Allen Taylor Board Meeting minutes of 18 March 1913 bluntly recorded:

> "The Chairman reported he had visited the district and had installed Mr. William Ringland as District Superintendent; Mr. Phillips having resigned. The Chairman reported the Nerong Crawford River and Wootton [Meyers Point] lines working satisfactorily, but the Markwell line, owing to the lack of proper hauling facilities, had not been kept going, and consequently the expense of hauling limited quantities was heavy. However suitable machinery a [logging winch] had been ordered, which would enable a much larger supply of logs to be secured, thus placing the line on a more satisfactory basis."

Frederick Phillips left Markwell shortly after. A fairwell social for him was held at the Markwell School of Arts, and people from all over the district came to pay glowing tribute to him.[14]

His reputation as a good employer, honest business man and a tireless worker for the local community had earned him a great many friends. He went on to promote the Walter Burley Griffin-designed city of Pindimar on the northern shore of Port Stephens, a port city designed to oust Newcastle as the main outlet for the north and northwest of the State. When this venture was killed off by vested interests in Sydney and Newcastle, he turned his attention to developing a thriving oyster farming business in Port Stephens, which his descendants are still carrying on today.

The Kennedy Forestry Report

In 1913 a steam logging winch was obtained and installed at the head of the Markwell tramway. In the same year Allen Taylor commissioned a report[15] from Thomas Kennedy, a surveyor with the NSW Public Works Department, on the status and potential of the Company's timber interests in the Port Stephens District. Kennedy's report was optimistic about the Markwell prospects, as the following extracts illustrate:

> I have the honour to submit a map and report on the timber reserves and facilities for handling same to the North of Port Stephens. I have made a lengthy report; but when consideration is given to the enormous value of the timber—assets which the Company has practically secured—one cannot enlarge too much on such an important industry, especially when one hears rumors of restricting the exportation of timber. More timber is destroyed by alienating valuable forests than by any other means as exampled in my report when the royalty on timber alone is worth six times the value of the land.
>
> I have the honour to be, Sir
>
> Your obedient servant, Thomas Kennedy.
> cc Sir Allen Taylor

PORT STEPHENS TIMBER RESERVES

Situated to the North of Port Stephens and immediately surrounding Bulahdelah are extensive forest reserves, all within easy distance of the navigable tributary channels connecting the Myall Lakes with the deep waters of Port Stephens.

There are three distinct timber areas which have been secured by the company owing to the tramway rights connecting these outlets to these forests with communication to navigable waters.

The Markwell Forest

This area embraces forest reserves on each side of the Myall River the head of navigation being the township of Bulahdelah.

The most eastern area consists of 16 square miles or about 10,000 acres averaging 20,000 feet to the acre the estimated amount of timber being 200,000,000 feet. This area is skirted by two main roads and the timber would be drawn by traction engine to Bulahdelah a distance of six miles. It is probable that the timber on this area would be largely used for sleepers piles and bridges, the area being isolated it cannot be secured in the same manner that the forest on the West side of Myall River at Markwell has been.

The west area of Markwell consists of about 50 square miles containing about 640 million square feet of marketable timber. It is almost impossible for any competition to profitably work the forest other than the Company owing to the main connection to the area being held by the Company, having six miles of horse tramway with a branch 1.5 miles long making a total of seven miles this tramway. The capacity of this tramway is about 20,000 feet per day. It is at the terminus of the tramway where the log hauler is so successful. An opportunity was afforded of inspecting this machine at work, during about an hour two large mill logs were drawn from the forest for a distance of about 300 yards without the slightest difficulty. The men engaged were one man attending the machine and one man and a boy attaching a cable to the logs. As an example of the efficiency of the process one log had been hauled up a slope of 1 in 4, the number of superficial feet being 3000 approximately weighing 10 tons. To cope with logs of this dimension would be quite beyond the strength of any bullock team without making a special road through the bush. It is estimated that the log hauler has a range of half a mile on each side, so that without moving, an area of 640 acres of timber can be worked. Allowing 20,000 feet to the acre this would amount to 12,800,000 superficial feet allowing that 40,000 feet per day were disposed of, it would only be necessary to move once in 12 months.

At Markwell close to the main road a saw mill is in operation, the sawn timber being drawn by traction engine a distance of 6.5 miles to Bulahdelah where it is transferred to boats. In order to ensure a permanent supply of water at Markwell it is proposed to put in a low level circular weir at a cost of about £50.

A dry stone embankment leading to a small bridge site at the left of this photo. The abundant sandstone rocks on the centre hill sections of the Markwell tramway made excellent construction materials. Long sections of stone ledges, embankments and bridge abutments are still evident in this area. Photo: Ian McNeil.

Encouraged by Kennedy's optimistic report, the Company made plans to expand their Markwell operations. In 1914 they made application to Stroud Shire Council for permission to build a four-mile steam railway from the mill to Cedar Wharf, along the side of the main road. The Council had no objections at all to any scheme which would take some of the heavy timber traffic off their roads, and quickly granted permission.

CLOSURE OF THE MARKWELL MILL

Unfortunately for the Company, the onset of the First World War impacted on their overseas timber markets. As it was fully committed to converting their Meyers Point to Wootton line from a wooden-railed horse-drawn operation to a steel-railed steam tramway, the proposed developments for Markwell were put on hold. These included an extension of the logging line, and the construction of a steam outlet tramway to Cedar Wharf.

By the end of the same year it was decided to rationalise their Port Stephens investments.

The company bought out the assets of a local sawmiller, Justin MacSweeney, who owned a riverside sawmill in Bulahdelah, and a large property at Windy Whappa, Hawkes Nest. Saw milling was abandoned at Markwell, and the mill machinery was moved to expand MacSweeney's mill in Bulahdelah.

A correspondent to the local newspaper lamented the impact of this move on the village:[16]

"Our little village is beginning to wear the appearance of "The Deserted Village". Some months ago the Allen Taylor Company, for various reasons, decided to shift their Markwell mill to a more central site down the river, and the work of pulling down the structure was at once proceeded with. The workmen's houses soon followed suit, and now the carpenters are busily taking the manager's house down for re-erecting elsewhere. Of all the employees only two remain on the spot, and they too will be leaving at any moment, so that in the near future, what was once the Skipton Sawmill at Markwell, will only be a dim memory of the past."

Tramway Closure

Little mention is made in the Allen Taylor records, and none in local newspapers, of the Markwell tramway following the closure of the saw mill in 1915. It was still operating at the end of 1917, with both sleeper cutters and the steam winch supplying it with timber. There were also periodic complaints from Stroud Shire Council concerning the damage that Allen Taylor's traction engines (sic) were doing to the Markwell Road (see p.32). The tramway leases were renewed at the end of 1917 for a further seven year period.[17]

It is doubtful if the tramway survived the end of World War 1. Stroud Shire Council were successful in having traction engines banned from local roads shortly after, and this would have cut a key link in the Markwell timber transport chain. There were (and still are) large reserves of good timber still available, as Thomas Kennedy outlined in his 1913 report, but the costs of extracting it out, weighed the profits at the low post-war prices then being offered. The tramway was becoming expensive to maintain with many of the stretches along Deep Creek being very susceptible to flood damage. Finally, to extend this standard gauge tramway through steep, rough country to tap more timber would have been expensive.

The tramway leases were allowed to lapse at the end of 1924, a sure sign that Taylors had given up any further plans of exploiting the Markwell forests. The steam logging winch must have been at the end of its economic life because it was abandoned at the head of the line, and was finally written off the Company's books in 1927.

MARKWELL TODAY

Nothing remains of the Skipton Sawing and Planing Mills on the banks of Deep Creek alongside the Bulahdelah Road. The old mill site has been comprehensively cleared, and only the odd fragment of brick and unidentified piece of scrap iron remain to be found.

However, long sections of the Markwell tramway have survived well and can be easily followed. This is especially true inside the Myall River State Forest where the line was built through sandstone country on the slopes of Cabbage Tree Ridge. The hard rock cuttings, ledges, and dry stone embankments have changed little over the years. Elsewhere though, the periodic Deep Creek floods have swept away some low lying sections, and a few lengths on private property have disappeared as a result of past farming activities.

Due to a peculiar legal quirk, the tramway rights across private properties were never extinguished, and the title for each block contains a caveat allowing a tramway to be constructed along the old route at any time in the future.

At least sixteen, standard gauge, wheel sets have been found along the tramway, indicating that there was no market for standard-gauge log bogies when the line was abandoned circa 1920, so they were abandoned. At the 4-mile peg the remains

The remains of a standard gauge ballast trolley found at the 4 mile point on the Markwell tramway. At first thought to be a log bogie, Bulahdelah engineer Colin Wear reassembled the surviving metalwork to show quite conclusively that it was once an open ended ballast trolley. Along with the other standard gauge rolling stock it probably came from the short-lived 1904 Crawford River steam tramway. Photo: Colin Wear.

of a 4-wheel ballast trolley were found alongside the line. The wheeled chassis of the steam logging winch was recovered from a creek crossing where it had been used as a bridge, and is now on display alongside Deep Creek Road.

There are large numbers of sleepers to be found along the old formation, especially on the ridge sections. A few lengths of the iron straps which were bolted onto the top of the wooden rails to reduce wear are found at some bridge sites. One fragment of wooden rail has been found so far, but quite a few lengths of very light-gauge steel rail are scattered along the formation in the vicinity of the branch line up Deep Creek.

Seventy-five years after the tramway was abandoned, it is not surprising to find that none of the wooden trestle bridges have survived. Away from Deep Creek though, fallen bridge timbers have proved very resistant to fire and rot, and quite a few are found at bridge sites together with the long iron bolts which once held them together.

The most impressive and lasting reminder of the Deep Creek Timber Tramway is the northern abutment of The Camber, the 180-degree curved bridge on the side of Cabbage Tree Ridge. This three-metre-tall dry stone embankment ends abruptly high on a hillside staring across the forest clad slopes of Deep Creek. It is a monument to the surveying skill of H.O. Hargreaves, the determination of Allen Taylor and Company, and hard work of the men who built it.

Today, no timber is transported down Deep Creek Valley to the sawmills near Bulahdelah. The tramway route pioneered by Frederick Phillips lies unused. Ironically, a modern forestry road along the summit of Cabbage Tree Ridge is used, the same summit that the tramway strove in vain to reach.

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THE MARKWELL TRAMWAY LEASES

1907.13 Frederick Phillips. Parish Myall, County Gloucester. A strip of land 50 links wide commencing at intersection of reserved road through portion 13 with west boundary thereof; and thence in a westerly direction to Special Lease 1907.7 for tramway in the same parish. 21 acres for tramway purposes.

4/9/1907 Application for lease.

25/3/1908 Granted from 1.2.1908 to 31.12.1917. Rent £25 p.a.

11/1/1918 Application for extension of lease.

28/6/1918 Extension granted from 1.1.1918 to 31.12.1924.

1907.14 Frederick Phillips. Parish Willahbah, County Gloucester on the 100 ft reservation above high water mark on the Myall River. Within Joseph's 1060 acre grant portion No. 16a and adjacent to old timber wharf. 1 acres for wharf and caretaker's residence.

4/9/1909 Application for lease.

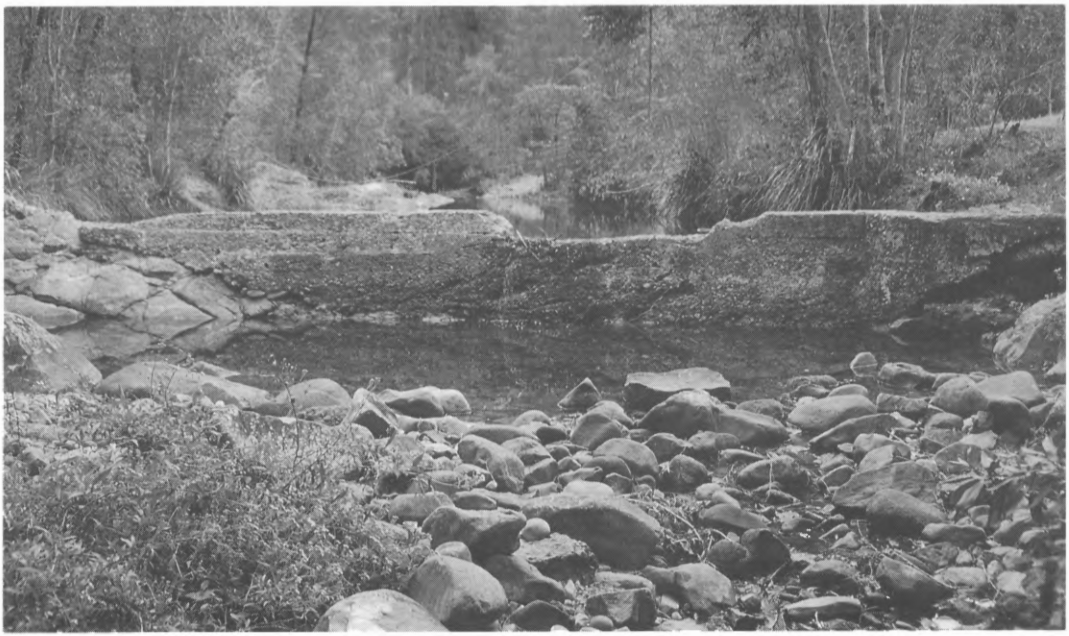
1907.9 Frederick Phillips. Parish Myall, Upper Myall, 7 acres water reserve 3414 fronting road Bulah Delah to Upper Myall, for grazing and depot.

23/10/1907 Granted from 1.10.1907 to 31.12.1912. Rent £1.10.0.

24/9/1913 Extension granted from 1.1.1913 to 31.12.1917.

27/10/1916 Forfeited non-payment of rent.

1908.5 Frederick Phillips. County Gloucester, Parish of Myall, Shire Stroud, on the north side of Deep Creek near the south eastern corner



The Markwell sawmill dam built in 1913. This small concrete dam was built across Deep Creek adjacent to the mill. It is still mostly intact some 80 years later and forms a popular swimming hole in summer. Photo: Ian McNeil.

of portion 16 thence easterly following that creek to near the north west corner of portion 42 thence from the eastern boundary south easterly through portion 35 to near the main road from Upper Myall to Bulahdelah. Width of lease 50 links. 3 acres 1 rood for tramway purposes.

12/8/1908 Application for lease.

23/6/1909 Granted from 1.7.1907 to 31.12.1917. Rent £4 p.a.

11/1/1918 Application for extension.

28/6/1918 Extension granted from 1.1.1918 to 31.12.1924.

1910.2 Frederick Phillips. County Gloucester, Parish Myall. Commencing at a point on Special Lease 1907.13 for tramway by Frederick Phillips where it intersects the Turkey Brush Road and thence through Forest Reserve 28405 generally north westerly about 40 chains and approximately parallel with Deep Creek. 4 acres for tramway purposes.

15/6/1910 Application for lease.

1916.14 Allen Taylor & Co. Parish of Myall, County of Gloucester, a strip of variable width from 33 links to 124 links wide along western boundary of water reserve 3414. 1 rood for tramway purposes.

16/2/1917 Application for lease.

25/10/1917 Granted from 1.1.1917 to 31.12.1923. Rent £4 p.a.

2/11/1923 Application for extension.

2/5/1924 Extension granted from 1.1.1924 to 31.12.1930.

18/2/1927 Forfeited non-payment of rent.

ACKNOWLEDGEMENTS

I am indebted to the late Ted Baker of Bulahdelah, who supplied photographs, enthusiasm, local knowledge, 4WD transport and great company during the expeditions to find and map the Markwell Tramway.

Thanks are also due to:

Jean Only, ex-president of the Bulahdelah Historical Society, for providing the historical information on Frederick Phillips, and the copy of the tramway survey.

Kevin Carter, District Superintendent, Bulahdelah Forestry Office, for permission to access historical forestry records.

WALKING THE POWELLTOWN TRAMWAY

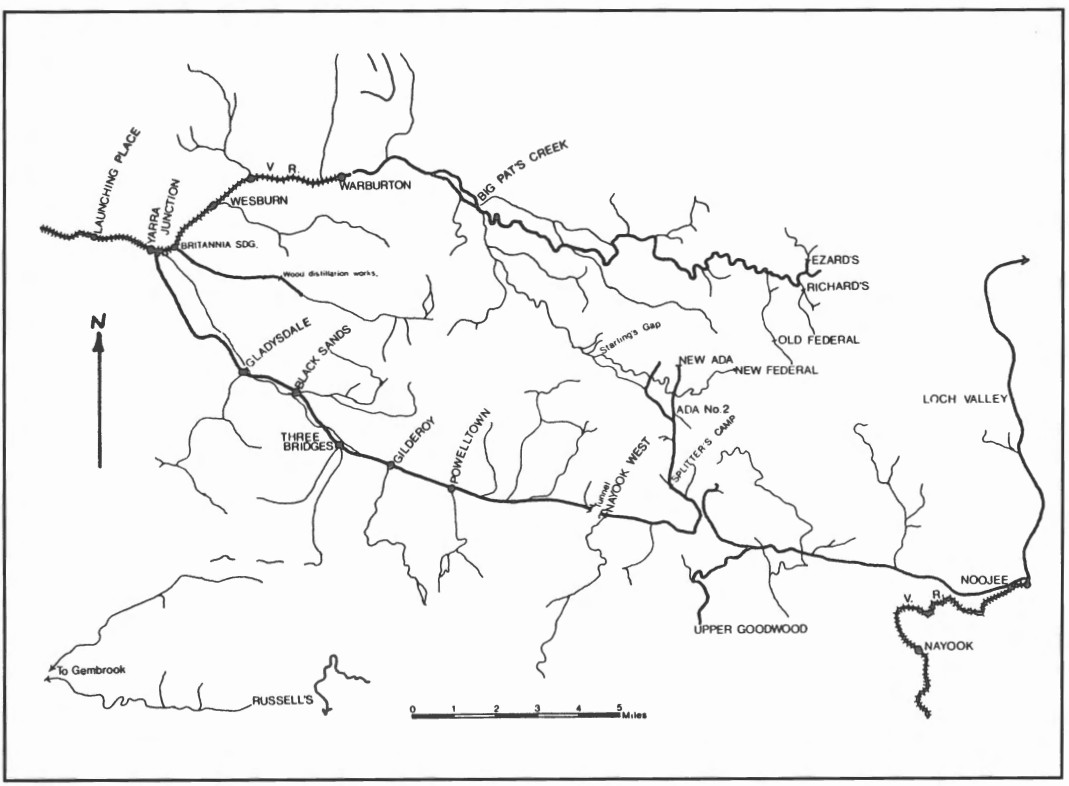
by The Late Ralph Alger

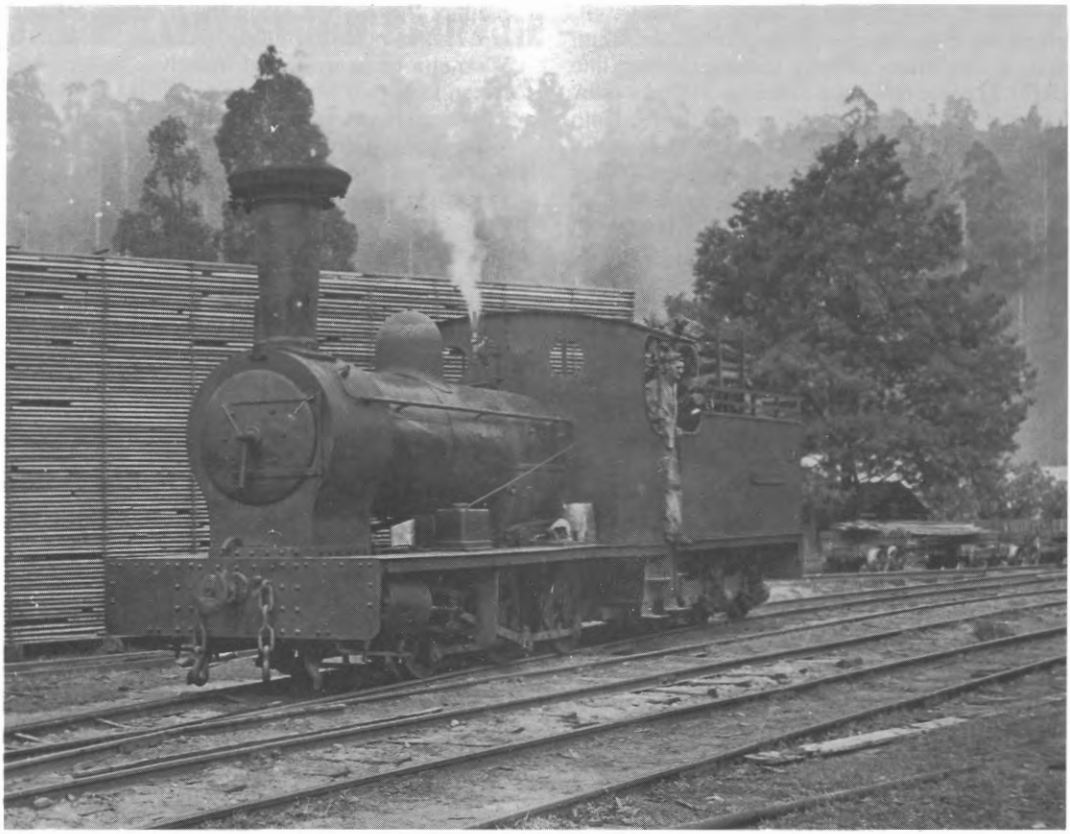
I took part in three walking trips along parts of the Powelltown Tramway in the years 1948, 1950 and 1951. If I had made notes of what I saw at that time it would have been good but it still may be useful to set down what I remember, as my memory of this kind of thing is good and is assisted by the few photos I took at the time.

29 July, 1948. Our bus took us up Big Creek Road to the start of Dowey Spur Road, down which we walked. Parts of the road were very sloppy and longitudinal boards had been laid in the worst sections. In about 2.5 km (I am helped by the modern map) we came on the tram line which looked as if it had been cut by the making of Dowey Spur Road. Only a few metres along the tram line we came to the tractor locomotive[1] parked outside a shed which I think was locked and which looked like a workshop. Just beyond here, going eastward was a built-up section with timber decking, two or three tracks wide and 40-50 metres long. It must have been three or four metres high but ground level was obscured by scrub. If there were any branch lines, I don't remember them. We reached the 'High Lead' incline where there were several huts not far below the crest. Some of these were well-lined huts, empty then, but probably had been living quarters. Rails and cable were in place and everything looked almost good enough to be working again on Monday. I asked our leader, 'Is it still working?'

After lunch we walked to the top of the incline and here things were not so good. As I remember it, the rails had gone and overhead cablework was tattered.

We resumed our walk northwards, crossing a big, sloping trestle bridge which looked quite new although grey coloured. We could see the long, low bridge over the Ada River to the Ada No 2





Powellite *loco at Powelltown, 23 November 1938. Photo: G.L.M. per Mark Plummer Collection.*

mill site, however, we turned left along the line to Ada No 1. This line was in very good condition and the country surrounding was bare of trees. We followed this steel line to the Ada bridge but, not crossing it, followed a foot track to the Starling's Gap line. This wooden-railed line looked much older than the one we had first left and it looked as if it had not been used for 20 years, with its rails rotted or missing. We followed this line up the Ada River, in many places on logs placed in the river bed. (We must have passed the Burnt Ada Mill but I don't remember it although I do remember the leader mentioning the name. There was plenty of scrub around but the line itself had recently been cleared by another walking club.) We came to a stop on a broken structure, probably a trestle bridge over the Ada River, but realized a foot track had been cut to the left down over the river and up the far bank to Starling's Gap. Here we had tea and an opportunity to inspect the still-in-use New Federal Line. We followed the steel rails eastwards to the first trestle bridge and then returned to inspect the west fall with its steep grade and plank-like rails. There was a locked shed at Starling's Gap, right next to the new Federal Line. From here we walked up the road to our bus.

2 and 3 September, 1950 Yarra Junction - Gembrook. Only a short part of this walk was along the Powelltown Tramway, that part from Yarra Junction to Gladysdale. I remember the curving bridge over Barrier Creek which must have been only about 1 metre above the water. We left the line (no rails there) at Slaty Creek Road which we followed southwards. We camped by the roadside about 1.5 km out of Gladysdale. There were two wooden-railed tram lines visible here, one which turned to the west and one which followed Slaty Creek. (I think these did not still exist closer to Gladysdale). We took a south-westerly course on various tracks and eventually came to the site of the water mill below McCraes Falls. There seemed to be only one shed still standing here but the wooden tram

line which we followed down-stream was well-preserved although charred in places. (This tram line went to Woori Yallock). Leaving the tram line after 1.2 km we crossed a low ridge to find a track along Shepherds Creek and followed the road into Gembrook. There was a fair amount of Russell's steel tram line still in place and, near Gembrook, a steam tank loco[2] rusting away, of which I took a photo. There were remains of a larger loco[3] right next to Gembrook station.

Labour Day Weekend, 10, 11 and 12 March, 1951. We planned to walk from Nayook West to Warburton via the High Lead and the New Federal tram line. We hitch-hiked from Yarra Junction and set up camp on Pioneer Creek quite close to the Powelltown-Noojee Road. At this time Pioneer Creek Road was being constructed and there were numerous huts for workers in a camp close to the start of the new road. At this time also, Nayook West Post Office was located in a building near the site of the State Mill on Pioneer Creek. Foot access was provided along the formation of the old Pioneer Creek tramway. It was a wooden walkway with new timbers supplementing the old sleepers. A 'Post and Telegraph office' sign was erected where the old tramway emerged on to the main road. Vehicle access was provided along Bennett Road. We spoke to the Postmaster and he said that the Pioneer Creek Road workers' huts had been moved down from the top of High Lead. I wish I had asked him by what route because I think Dowey Spur Road had not then been put through to the High Lead incline. The P.M. suggested we could do some walking on tram lines in the area but, perhaps unfortunately, we didn't. We walked out via Bennett Road and on the way crossed a wooden tram line which I would say (but did not measure) was 3 ft 6 in gauge. It looked as if it had been laid two or three years ago but little used as the rails were unfrayed. I have never seen any map that marks this line which is not to be confused with a Goodwood line at a higher altitude which approximates present-day Herrod Track. (In 1982, while walking the Goodwood-Upper Goodwood line, I found a likely junction point for this line.) We paid a visit to the eastern portal of the Bump Tunnel which, of course, had been closed by blasting. I don't remember seeing any branch lines here but there was a fair amount of scrub as there had probably been no clearing since closure. We returned to camp.

Next day we were to follow the Powelltown line over the 'High Lead' and being certain of only one access point, we returned to the point near Nayook West where the road crossed the river and the formation. We pushed along the tramway easterly and had to push through a lot of debris. After a kilometre or so we found ourselves walking between steel rails which soon came to a dead end. This must have been a siding and was about opposite Pioneer Creek. We retraced out steps and found the mainline formation which crossed a low embankment heavily covered in tall bracken. We soon came to the part now known as 'High Lead Car Park' and from here the line was easier to follow, having a narrow, worn footpath down the middle. I took a photo at the Latrobe River bridge. We saw the sawdust heap at Knotts Mill to the right end then crossed the Big Creek trestle where I took another photo. There was still timber decking at the foot of 'High Lead' incline. The scrub was encroaching on the path most of the way up the incline. I have no more clear recollections till we came to the incline just past Ada No. 2. This was timber construction at this point and bridged over the New Federal Line, which we climbed down to, and set off westwards towards Starling's Gap. I had thought the New Federal Line was steel railed but although the steel had been lifted there was still a lot of wooden rail left. I remember the level crossing arrangement at the line to Ada No 1. All the trestle bridges on this section were in reasonable condition and I took photos of a couple. Some of my party were beginning to feel tired and became a little impatient at my saying half a dozen times that Starling's Gap was 'just around the next bend' but we reached it eventually and camped.

Next morning we continued down the New Federal line towards Warburton. I remember seeing a sawdust heap on the hillside above us on our right soon after leaving Starling's Gap. (I should also mention the Starling's Gap sawdust heap which was very large at that time). I remember the junction with the Smythe's Creek line. This wooden line appeared to be in very good condition. At 'The Points' I do not remember seeing anything of Richard's or Mississippi tram lines but do remember the two routes between there and the Yarra River. In the yard at the back of Brimbonga Seasoning Works was a derelict chain-driven locomotive[4] but, typically, I didn't study it or photograph it.

Ed's Notes:

1. A "very old Fordson", see 'Powelltown' p. 104.
2. Kerr Stuart 0-4-2T 743 or 797.
3. Day's Engineering 0-6-0 + 0-6-0 1927.
4. What did Ralph see? Your Editor awaits a deluge of letters and photographs!

THE WILLIAMSFORD HAULAGE – TASMANIA

by Greg Grant

Mention was made in LR 128 of constructing the 2 ft (610 mm) gauge North East Dundas tramway from Zeehan to Williamsford. The purpose of the railway was to convey timber to various points as well as ore from the mines in the Mount Read/ Mount Hamilton areas to the smelter in Zeehan. The ore was mostly obtained at the Hercules mine, 800 metres above Williamsford on the side of Mount Hamilton. The ore was transported to the rail head over a 1600-metre-long rope-worked haulage on an average grade of 17 degrees, with the steepest section being 32 degrees (1 in 1.5). The haulage was built in 1898-1899 using 20 lb/yd rails and officially opened on 25 March 1899.

The twin-rail haulage was operated as a balanced funicular using an endless rope to which were attached 32, one tonne capacity trucks, 16 loaded going down and 16 empties going up. An operator at the top end regulated the movements by brakes acting on grooved control wheels. The rope was of 3½ in (89 mm) or 3¾ in (95 mm) circumference, depending on which source is consulted.

The system was slow in operation as every so often the rope was stopped to enable the trucks to be attached or detached. Seven, and later five, men were needed to work the haulage which at the best of times had a capacity of 25 tonnes per hour.

The Hercules mine used the smelting facilities in Zeehan until 1928 when the mine's then owner, the Electrolytic Zinc Company of Australasia, decided to erect a new mill at Rosebery. The proposed new plant was just seven kilometres north of Williamsford so this decision meant the end of the railway to Zeehan. The North East Dundas line was officially closed on 30 June 1929.

The Electrolytic Zinc Company considered several options in a feasibility study looking at how to transport the ore between Williamsford and Rosebery. Road, rail and rope were all examined and costed. Rail and road connection were deemed too expensive so the ropeway was given the go-ahead. However the ropeway could not economically commence at the mine (high up the mountain) because the haulage was still needed to bring stores, timber and the workers from Williamsford itself. So the haulage would remain and the ropeway to Rosebery commence from the ore bins at the bottom.

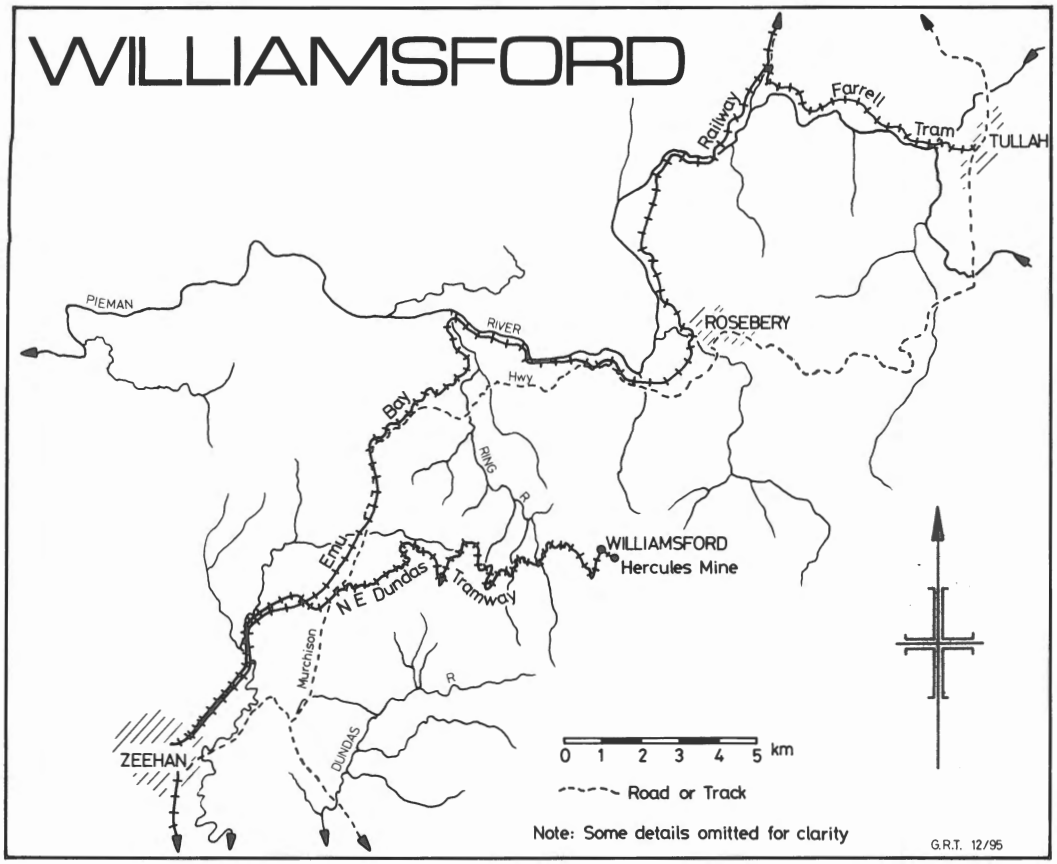
The haulage was rebuilt in 1931 in order to meet the proposed increase in daily tonnages. The original rails were replaced with 38lb plant. The top end of the haulage was further extended 30 vertical metres over the short distance beyond the ore loading bins to provide for the unloading of stores and timber. The track ran up to a benched level spot close to the rope terminal where stores and passenger trucks could be attached and detached from the rope. The lowering gear was electrified, a new rope installed and seven tonnes (later reduced to six tonnes) capacity ore trucks attached to each end of the rope. The revamped haulage could handle 50 tonnes per hour and be worked at a speed of 15 kilometres per hour (initially but later raised). Four men were required to work the haulage.

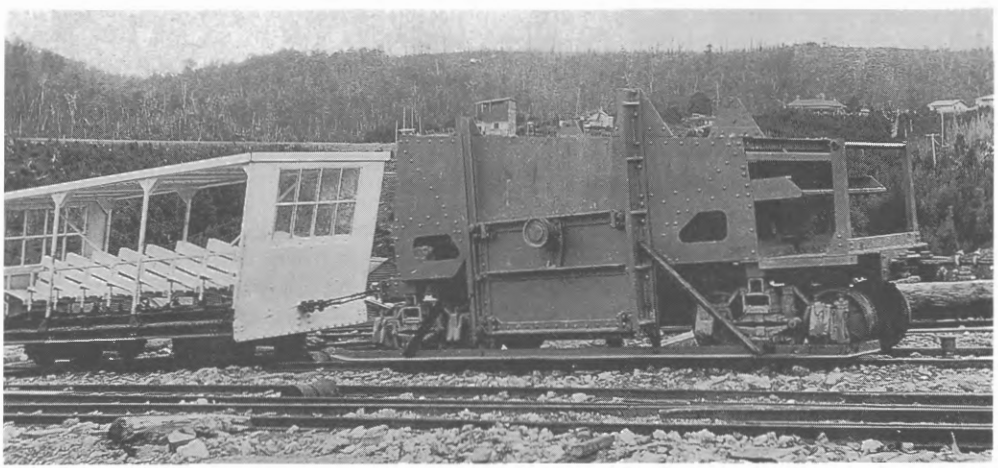
Rolling stock comprised two ore trucks, two passenger cars, two stores trucks and a special truck for unusual loading. The ore trucks were 16 feet long, by six feet three inches wide and six feet nine inches deep (4.8 x 1.9 x 2.05 metres) on two bogies at 11 feet (3.3 metres) centres. A seat for three persons was provided on the top-end platform. Ore was discharged from a vertical sliding door on each side worked by a ramp engaging a slide bar attached to the door. When passing through the ramp each truck was slowed to five kilometres per hour and was emptied in a few seconds.

The passenger cars were 16 feet long by five feet nine inches wide by six feet eight inches tall (4.8 x 1.75 x 2.03 metres) and weighed two tons 14 hundredweight (2.7 tonnes). Each body was of welded tubular frames. The cars seated 18 persons in reclined seats corresponding to the mean angle of the haulage.

The two stores trucks were flat tops similar in design, one being 14 feet (4.2 metres) long, the other 10 feet (3 metres) long. The lower end of each truck had a back for supporting the weight of the load.

The haulage remained in continuous use almost until the mine closed. By the 1980s exhaustion of ore reserves and the antiquated mining methods made the Hercules mine uneconomic. The haulage was decommissioned on 20 February 1985 when motor trucks took over the carting for about one year until the mine was finally closed.





Williamsford haulage passenger car and ore truck, 1934. Photo: Pasminco.

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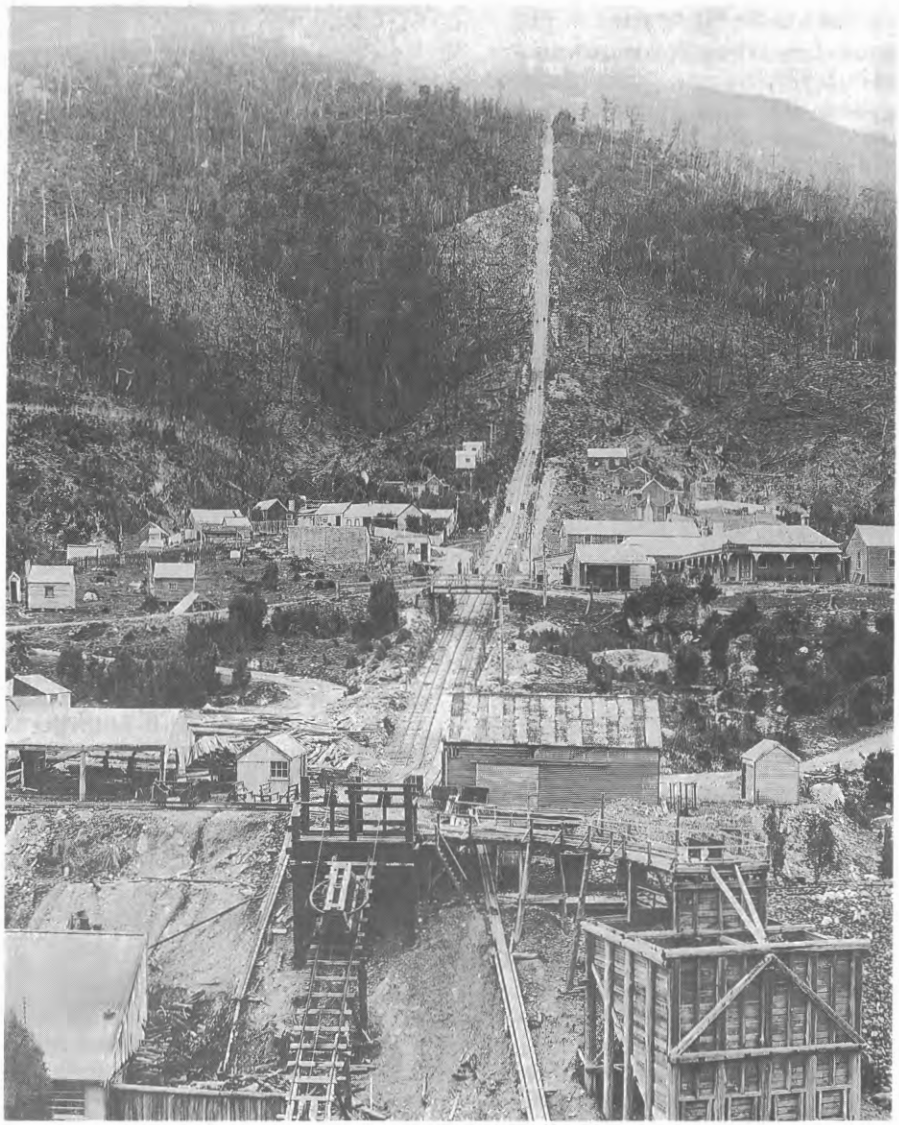
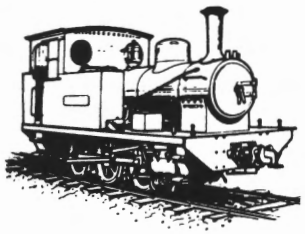


Williamsford haulage as originally constructed and worked. Photo: Pasminco.



REVIEW

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From Memory Line in New Zealand, 60 minutes, stereo and hi-fi. $39.95.

Featuring Bush Tramways, Heislers, Climaxes etc., steam logging engines and a multitude of home-made rail vehicles and machines of the New Zealand forests.

Memory Line have excelled themselves with this excellent programme, which opens with footage in colour of the last working bush tramway, the narrow gauge Driving Creek line with great scenery, including a two-level bridge over a creek and side-rod diesel; working the train. The programme then moves on to views of the remnants of the very old bush tramways and stills of incredible contraptions from the early days. Then is seen the wooden railed tramway in 1982 in Saltwater State Forest, with a train hauled by a locomotive powered by a Ford Prefect petrol engine – a fully commercial operation. Old film follows of track laying, a steam-powered cable log hauler pulling trees from the bush and the Brownlee's Mill bush tramway. Then there is coverage of a Climax running on Ellis & Borland's bush tramway with the formation hewn out of an almost vertical cliff face, rugged countryside and wooden trestles. A Price "16 wheeler" is seen at work and the cameraman rides a log train viewing a running brakeman pinning down handbrakes. At the mill, powered by a two-cylinder steam engine, a steam saw cuts logs as old-style tractors complete the scene. In the mid 1950s Smythe Bros. Climax 1317 was captured just two weeks before the line closed. There is Heisler coverage in 1965. The programme closes with views of many of the incredible things that ran on bush tramways – home made vehicles, converted cars and vans and all sorts of strange petrol-engined devices.

Available from AHRS Sales, 67 Renwick Street, Redfern NSW 2016.

LETTERS TO THE EDITOR

Dear Sir,

NSW Pastoral Tramways LR 80

Another tramway for removing bales of wool from a shearing shed, is recorded at the 'Berida' shed. Gauge looks about three feet; one flat, four wheeled trolley was used to carry bales easily from the shed for loading. References: Dormer M. and Starr J., 1979. "Settlers on the Marthaguy in western NSW." Berida is between Gilgandra and Warren.

Jim Longworth
Cheltenham NSW

* * *

Dear Sir,

What is a Light Railway? (LRs 125, 126, 129 and 131)

I agree with Arnold Lockyer's comments in LR 131. It is too restrictive to attempt to define the term "light railway". It is better to leave the term undefined, and let the editors of Light Railways, and Light Railway News interpret its applicability. If they stray too far off line, no doubt "market forces" will correct those problems.

Perhaps when this organisation was founded in 1961, it should have been called "The Society for Encouraging Historical Research into Railways which are not Adequately Covered by Other Organisations" for that was its objective. A name like that is not very marketable, so the generic term "light railway" was adopted. Terms like "industrial railway", "tramway" and "private railway" were considered but rejected, since in some cases they were either too restrictive, or ambiguous.

The problem with "light railway" was just the opposite, it was too broad. It seemed better to give the organisation a title which would give flexibility rather than confine the Society within boundaries which were too tight. It was never intended that the Society would attempt to cover all light railways in Australia, since there were other organisations adequately covering electric street tramways, and light branch lines on the government railways. When the Society was founded the majority of the Queensland Railway system was "light", as were significant parts of all other state railway systems.

So how does a "light railway" differ from a normal railway? Gauge, length, size or type of motive power, purpose, and degree of grottiness are all irrelevant. Maximum axle loading permitted on the rail is a fairly objective defining point, since light rails, or light civil engineering works, imposes axle load restrictions.

When Light Railways 26 was published (which featured the Silverton Tramway) there was a lot of criticism from people claiming the Silverton Tramway was not a light railway. True the Tramway may have run long trains, and used locomotives which looked big, but it was restricted in the type of locomotives it could use by the light rails. The "big" 4-8-2 locomotives were designed to have light axle loads of only ten tons to run on 45 lb rails. All those wheels were necessary to spread the weight.

The Emu Bay Railway has an impeccable light railway pedigree, but most people consider it is no longer a light railway. This is arguable. Their heaviest diesel locos, the 11 class, weigh 54 tons, giving an average axle loading of 13.5 tons, which is light. I suspect the standard of the track and bridge imposes this axle loading restriction, if this is so, it is still a light railway. If it was a heavy railway they could have used heavier locos, and not resorted to the using up to nine locos on a train. Similarly, its 4-8-2-2-8-4 Beyer Garratt locos may have looked big, but the weight was spread over many axles, to reduce the maximum axle load.

Jim Longworth's four interesting photographs in LR 125 and 129 all illustrate light railways, since they all involve wheeled vehicles guided by rails, and they are all obviously "light".

What is an Industrial Railway?

The term "industrial railway" is much too broad, since it covers all railways that are not run purely for fun on private property. Those who propose this term are only thinking of primary (agriculture, mining, quarrying), and secondary industries (manufacturing). But in today's economy tertiary industries (services) are the most dominant in dollar terms. Service industries include transport and tourism, hence – as Arnold Lockyer points out – all railways are industrial railways.

Having said that, Phil Rickard's concerns in LR 129 are justified. Perhaps these concerns could be addressed by defining a brief "mission statement" for the Society, and publishing widely and repeatedly.

What is a tramway?

It is surprising that nobody has raised this question in Light Railways, since it often comes up in conversation. If you try to answer it by looking for physical differences between railways and tramways, you will get bogged down with so many exceptions, that a definitive answer seems impossible.

The one thing that differentiates all tramways from railways, is the legislation under which they were allowed to be built. In effect, "tramway" is therefore a legal term.

So here is my definition of a tramway:

A tramway is a railway whose construction has been authorised under a Tramways Act.

That is a simple definition which seems to cover all cases, from BHP's Coffin Bay Tramway in South Australia, (which is a heavy main-line railway), to the electric trams that run in Melbourne.

Tramways Acts differed from state to state, hence a tramway in one state, may be a railway in another.

Frank Stamford
Canterbury, Vic.

* * *

Dear Sir

What is a Light Railway?, LRs 125 & 129

Following Phil Rickard's working definition (LR 129, p.30), the attached two illustrations are offered for comment.

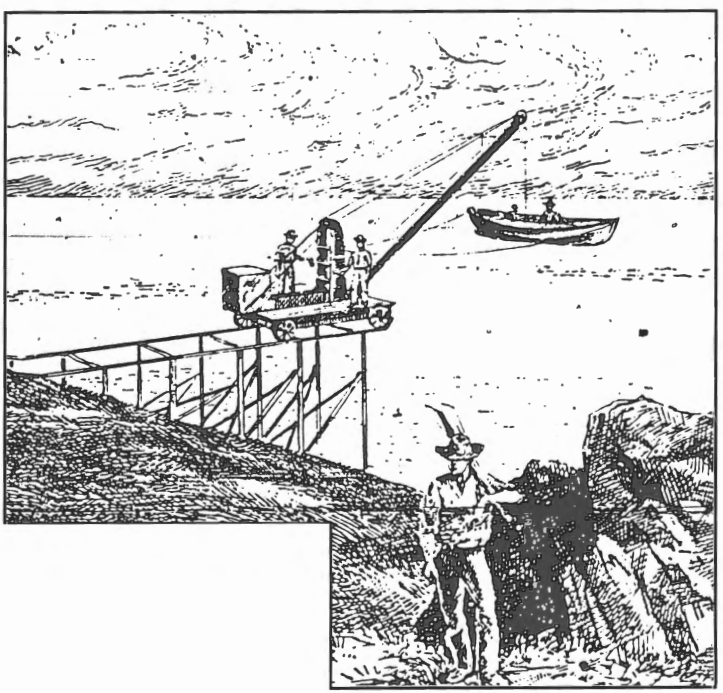
The first is a travelling lead-joint crucible. In the early days of this century molten lead was poured into the joints between sections of water pipelines, to seal the joint. This photo was taken on the Chichester Dam – Newcastle pipeline (LRRSA, NSW Division, Research Bulletin, No. 7, January 1991). [Photo: Hunter District Water Board, Photographic Section.]

The second is a sketch of the boat and stores landing crane on Solitary Island. [Illustrated Sydney News, 8 August 1889.] A photograph of the crane is also in the 'Work and Play' photographic disc in the Mitchell Library, Sydney.

Jim Longworth
Cheltenham NSW.

Errata: Rottnest Island Notes LR 131

The railway construction contract was for 6.7 km, not 6.6 km (4.14 miles). The length of 60 lb/yd rails was 1600 metres, not 80 metres. The Editor humbly accepts blame and promises in future to stay out of night clubs before editing sessions.



Dear Sir,

Essendon City Council trams

My grandfather was employed by the Essendon City Council, Melbourne, in the 1920s and I recently came across some items of tramway interest in his papers.

It seems that the Essendon City Council operated a quarry from 1909 on the banks of a stream, either the Maribyrnong River or Steel Creek. It is possibly the present quarry hole opposite the Keilor Heights High School and accessed from the Avenue and Keilor Road.

The quarry plant was considerably expanded in 1922. At this time the Council purchased a tramway outfit comprising a Fordson loco tractor, 1.5 cubic yard side tipping hopper trucks and rails. The tramway was used to cart the broken stone from the quarry face to the crushing and screening works.

The loco was supplied by Malcolm Moore Ltd and could pull four loaded hoppers along any of the grades in the quarry floor, with the steepest being 1 in 28.

The Council also operated another tramway system at its municipal incinerator from the late 1920s. This tram was engaged in ash removal and comprised two box-type hopper trucks running on separate tracks and each pushed by a human attendant.

I have enclosed some very poor photographs and hope that they may be of interest.

John Carter
Yeppoon Qld.

* * *

Dear Sir

Yan Yean Tram Road LR 20

The Plough Cutting (Grid Ref CU296304) has recently been filled in.

Colin Harvey
Reservoir Vic.

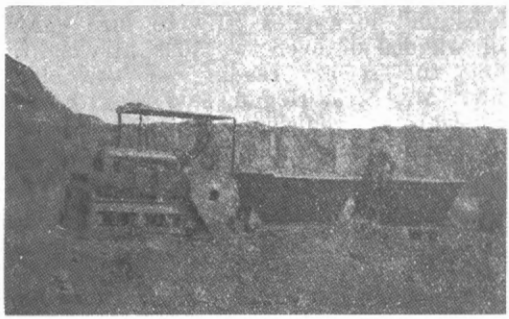
* * *

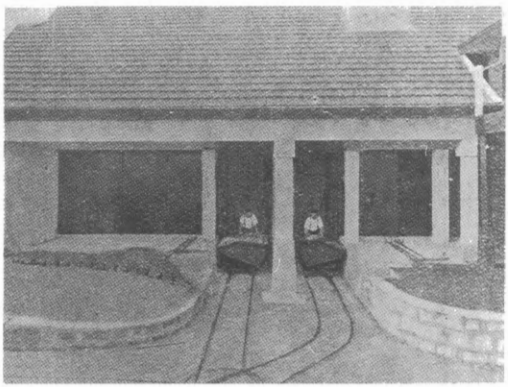
Dear Sir

W.A. Woodlines

I was interested to note the account of the Lakewood wood line in LR 126. There was no map with the article so I have enclosed one for your readers' information.

There were several wood lines in the Kalgoorlie area commencing at Kurramia, Lakeside and Kurrawang. Eventually these were merged into one company called the Goldfields Firewood Supply Co. The main identity behind this company was Tom Hedges who was a railway contractor, farmer and Member of Parliament, although not all at the same time.





Another identity of the wood lines was Ned Hogan, Victorian Premier 1926-28 and 1928-32 (two terms split, not continuous), who worked on the Kurramia and Kurrawang operations from 1905 to 1911. Hogan was active in trade union affairs and did much to assist the woodcutters who were mostly Italians and Austrians.

The company initially operated out of Kurrawang to the east of Kalgoorlie. One line ran north for about 100 km to Davyhurst until the bush was cut out. A second line ran south to Cave Hill and beyond, about 180 km distance, until this too was cut out.

The Kurramia route ran to the east and south. Copy of it is shown on p.31. The building of the Transcontinental railway ended this company's source of supply as it was not permitted to cross the Trans.

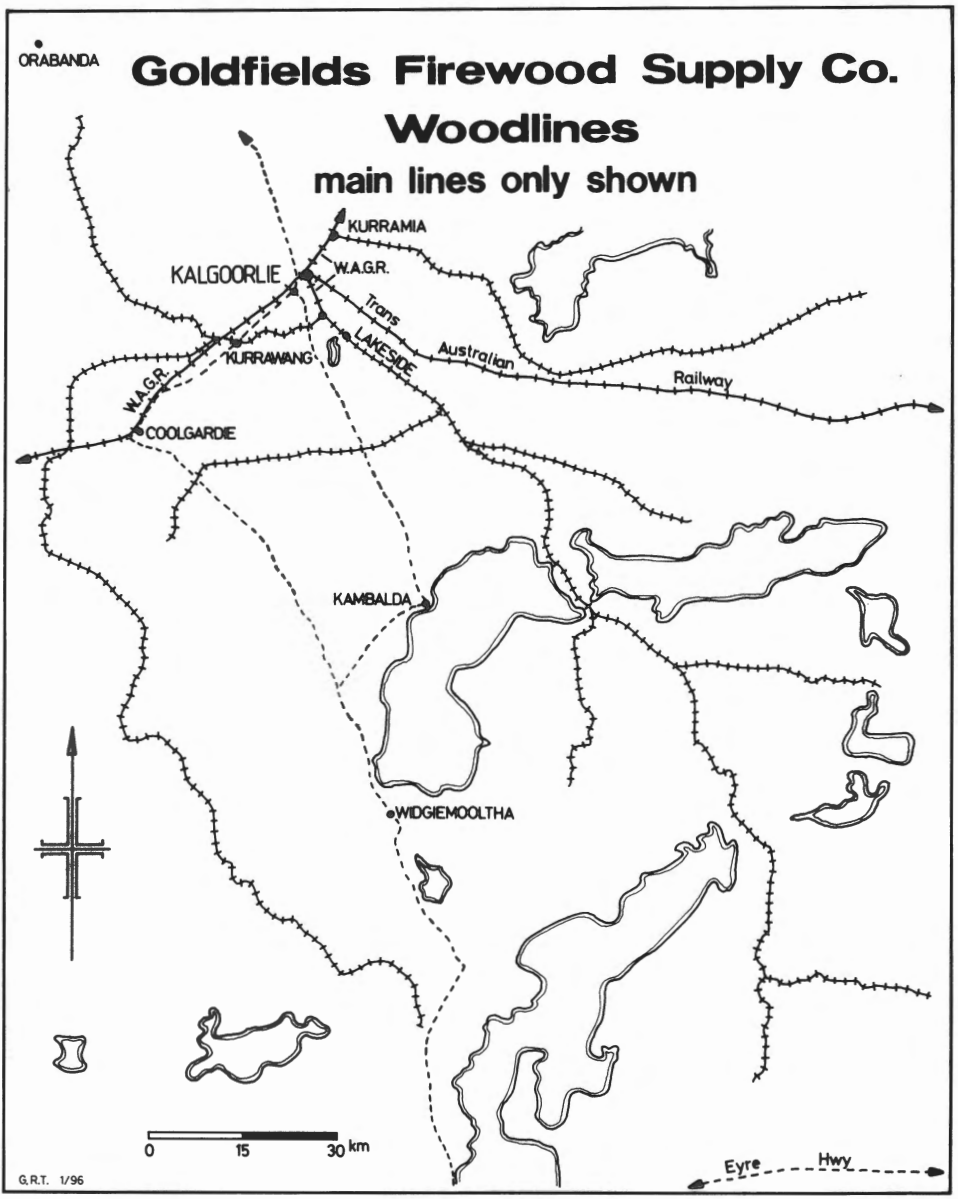
The third and final route after 1917 was from Lakewood, six km south of Boulder. A completely new rail line was laid southeast to exploit the bush,

south east of Kalgoorlie to just north of what is now the Eyre Highway. This operation endured until the track was about 220 km out.

Just after the Second World War the company fell into financial difficulties and was bailed out by the W.A. Government in 1948. Kalgoorlie was utterly dependent on firewood for its power station and gold mines so the company could not be permitted to fold. The Kalgoorlie Chamber of Mines became the main shareholder in the new company and kept it in operation until 1954.

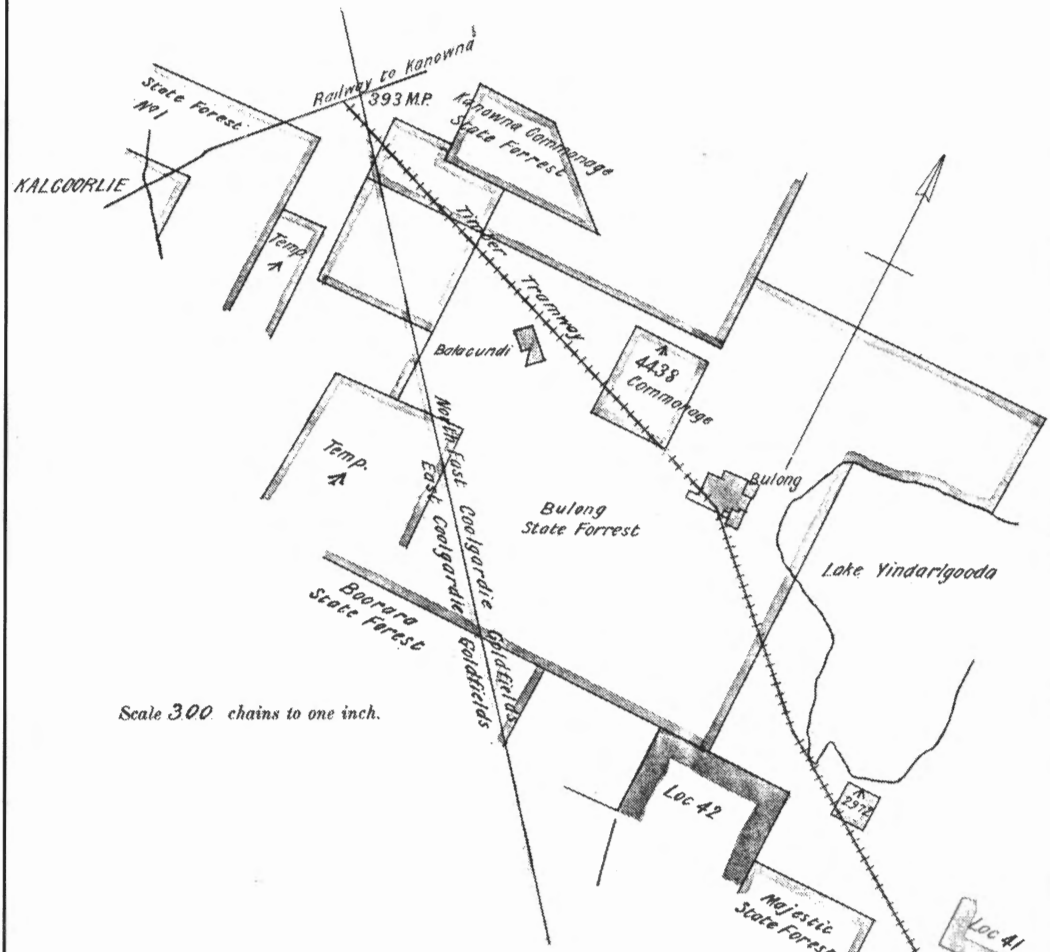
Trevor Sutherland
Warrnambool, Vic

[Ed. Note: Adrian Gunzburg and Jeff Austin will soon be releasing a history of the locomotives on these woodlines. Look for it.]



DESCRIPTION.

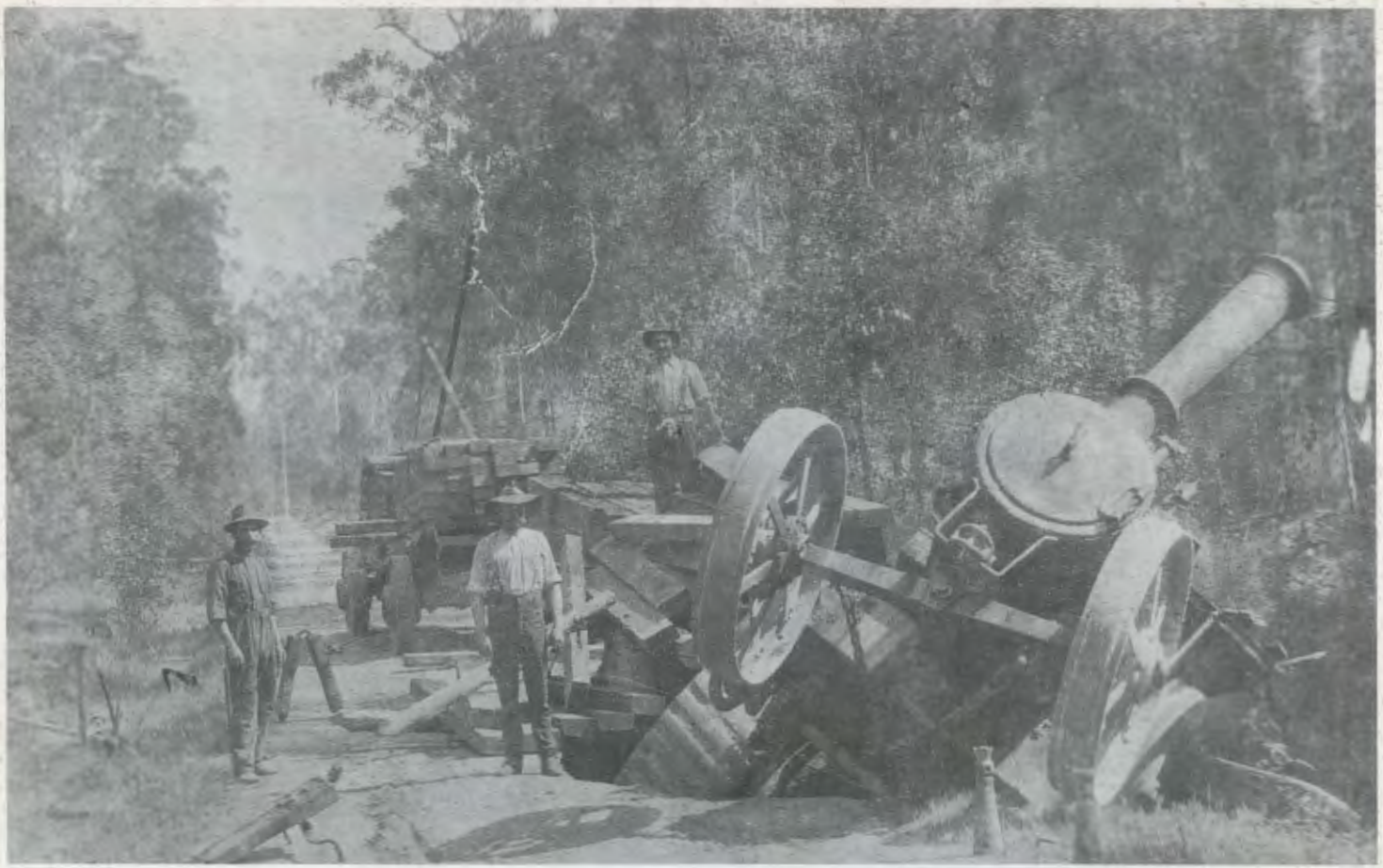
A strip of land twenty feet wide starting from about the 393 M.P. on the Railway between Kalgoorlie and Kanowna and extending in an East South Easterly direction about 17 miles, thence South Eastward about 9 miles, thence South Eastward again about 14 miles, as shewn on plan hereunder.



In witness whereof I have hereunto set my hand this sixth day of December, in the year of our Lord on thousand nine hundred and six.

35/302

Sgd. Fred. G. D. Bedford
Governor.



This is what happens when you do not use a light railway. A mishap on the road to Bulahdelah. This photo was taken on 5 November 1915 after one of Allen Taylor's traction engines, driven by the Brislane brothers, proved too heavy for one of the road culverts. While not hauling Markwell timber here, this photo clearly shows how unpopular traction engines were with the local councils.
Photo: Bulahdelah Historical Society per the Late Ted Baker.