

Alexander Robert Entrican

The man for his time

Peter Berg

Any consideration of important events over the last 100 or so years of forestry activity and development in New Zealand should not overlook the part played by those people most directly involved inside the industry. Among those who wrought profound changes, the name of Alex Robert Entrican is one that stands out.

Entrican died 48 years ago, only four years after retiring from a 40 year career in the State Forest Service, the last 22 of which were spent as its head. Few of us still active in forestry in New Zealand will be able to recall much from his period of leadership, and even fewer of us ever knew him. Yet there is little doubt that his contribution to forestry, the burgeoning forest industry that we now have in place, has not been exceeded by any other forester.

Waipa sawmill, the first to solely cut radiata pine on a large scale for use in the domestic market, was a product of his vision. It demonstrated the value of the extensive plantation forests established in the Bay of Plenty region. Spring-boarding off this development, the major wood use complex based at Kawerau, and known for decades as the Murupara and later the Tasman scheme, was part of an industrial revolution in New Zealand's forest products industry which continues to the present day.

Enviably record

His record of achievement during his long period of leadership is an enviable one. He should have died a proud man. An article in the *Dictionary of New Zealand Biography* by JR Martin describes Entrican's early years. He was born in Devonport, Auckland on 28 January 1898 and attended Auckland Grammar School and Auckland University. He studied engineering, graduating at the end of 1919, then subsequently took a position with Wellington firm Hay and Vickerman as chief assistant civil engineer. Two years later he was appointed to the position of engineer in forest products in the newly established State Forest Service, where he was to remain for the next 40 years.

Large areas of plantation forest had been planted by the Forest Service in the 1920s, and particularly the early 1930s during the Depression years. Very little follow-up management had been carried out due mainly to the depressed economic conditions. Entrican's early work covered a range of timber use matters, including new designs for butter boxes, strength testing, drying and preservative treatment of a number of native and exotic species. He wrote a number of reports around these studies. However the focus of a good part of his attention soon changed to these growing plantations.



A visit to New Zealand in 1925 by William Adamson, who was the technical director of a major United Kingdom based paper-making machinery manufacturer, led to proposals for pulping trials with radiata pine, tawa and a couple of other species. In 1927 and 1928 Entrican travelled to Australia, North America and Europe to investigate the pulping properties of New Zealand grown wood, including both exotic and native species as suggested by Adamson.

Then in 1932 he travelled to the United Kingdom and Scandinavia to look more closely at the pulping properties of pine species, recognising that the vast forests established on the Kaingaroa Plains and elsewhere in the Bay of Plenty region were a resource with great potential. Contacts developed with the United States Department of Agriculture Forest Products Laboratory in Madison, Wisconsin allowed the pulping properties of radiata pine as a source of pulp for newsprint to be explored. These were later paramount in the decisions made around industry development in this region.

Entrican recorded that it was left to him to convince his department head 'Cappy' Ellis and others of the pulping and other potential of the early forests. He also said that from a relatively early stage in the 1925 to 1935 planting boom, creating a resource suitable for a pulp industry based upon Kaingaroa Forest became a deliberate objective.

Director of Forests

Through the 1930s his role expanded and in 1939 he was appointed Director of Forests (CEO of the State, and later New Zealand, Forest Service), a significant appointment at the comparatively young age of 41. With the advent of World War II and scarce manpower, the exotic forests were further neglected. The war years must have been a frustrating time for Entrican, as he was anxious to get on with his plans for bringing the plantations into production but was constrained by wartime limitations.

His chief function over those years was as timber controller with the power to regulate all timber use, both state and private, in order to meet wartime timber

needs. Probably this period gave him time to formulate his plans, because in the decade following the end of the war he introduced innovations and institutions that would become the virtual fabric of the New Zealand Forest Service and this country's forestry for most of the next 50 years.

The end of the war was accompanied by the return of many young New Zealanders keen to establish themselves in the community. Many settled on new farms, while others commenced or re-commenced training in a wide range of useful vocations. This large body of fit young men included a group of new forestry trainees as well as many others at university. Their availability for other work, especially during the summer vacation, meant one of Entrican's main projects was able to be started. This was the National Forest Survey, an ambitious but important project to help identify just what forest resources New Zealand still had available outside the developing plantation forests.

Forest survey

Entrican was adamant that it was impossible to plan without adequate knowledge of the native forests, and he ordered a national inventory which was to be led by a future director, Priestley Thomson. This gargantuan effort which took 10 years, from 1945 to 1956, has been ably described by Julia Millen in *Through Trackless Bush: The Story of the New Zealand National Forest Survey* (Millen, 1999). This work not only provided an outstanding inventory of the composition and state of the country's native forests, but also confirmed that native forests no longer had the capacity to meet New Zealand's growing demand for wood fibre for domestic purposes.

Meanwhile, the planting boom's focus on using forest products continued. In the central North Island the choice initially appeared to be between newsprint and sawlogs as the prime product of the plantation programme. In practice, both options were pursued. Entrican advanced proposals for the Forest Service – to act as a testing ground for product and machinery suited to the now extensive plantations, and to develop economic production units for logs from the plantation forests.

In 1940, the establishment of a sawmill at Waipa, based on Swedish equipment, was completed and included a box factory and preservative treatment lines. In the Forest Service's 1941 *Annual Report* it was noted –

Insignis pine under the impact of war conditions has already attained an importance both unique and unexpected. No other timber is filling so many roles or substituting in... so many fields of use.

Entrican further commented that –

...the fundamental financial objective of the Waipa Sawmill – establishing an adequate stumpage for State Forest exotic timber... has already been achieved. The other test of successful operation – consumer satisfaction – is being met.

Objectives such as achieving precision sawn timber, bright clean stock free of stain or mould, and effective merchandising were essential for the State Advances Corporation, the major government funder of private home ownership, to approve the use of pine timber for general building purposes.

Forest Research Institute

In 1947, Entrican moved the forest products division of the Forest Service from Wellington to Whakarewarewa, Rotorua, creating the Forest Research Institute. From small beginnings and using seconded Forest Service staff with no official research status, the foundation was nevertheless laid for a science-based and led industry. FRI, as it quickly became known, was a multi-faceted organisation studying wood, its properties and uses along with other sectors working on all aspects of silviculture and tree breeding, tree nutrition and tree health.

However, work on the main physical and mechanical properties of New Zealand timbers remained a vital issue. The Forest Research Institute was located first in a collection of huts on State Forest land on the site of the old Whakarewarewa nursery. At around the same time, and on adjoining sites, formal training for Forest Service people began. Writing in *A Century of State-Honed Enterprise* (Kirkland and Berg, 1997), GM O'Neill, Director-General of Forests 1978 to 1983, said:

...the idea of introducing field training for staff... was put in place in 1940 when a small group of young men, designated technical trainees, were appointed. The man responsible for introducing the scheme was TTC Birch, but... the idea was floated by AR Entrican.

The programme really got under way, covering staff in many occupations but with a strong focus on field staff in the post-war period. Over the next 40 years the Forest Service recruited and trained young people for roles in forestry on a continuous basis. It was no accident that numbers recruited exceeded the department's own staffing needs. Many external agencies sourced their capability from the Forest Service's ranks. Again as O'Neill recorded –

...over a period of more than 30 years the Forest Service supplied the drive and leadership necessary to provide a solid base of professional competence to the forestry sector.

Possibly nowhere else was this wider support for the sector more evident than in the field of forest biosecurity. In other countries foresters were experiencing significant losses in their forests due to outbreaks of pests and diseases. This was probably due to the greater mobility of the world's travellers, and the introduction to other parts of the world which two World Wars had provided. In New Zealand the growing reliance on a monoculture of radiata pine was considered to be particularly risky, with broad areas of a single species said to be more prone to disease and insect outbreaks than natural forests with

a range of species. Therefore in 1953 the Forest Service engaged JJ de Gryse, a prominent Canadian forest pathologist, to

...furnish a comprehensive report and recommendations on the essential measures and practices to adopt to safeguard the country's exotic forests from the threat of insect and pathological epidemics.

Forest health surveillance

One of the recommendations in the de Gryse report was a system of forest health surveillance by means of a detection survey. Such a group was established. The staff were originally known as Forest Biology Observers but this name was changed to Forest Health Officers in 1979. That virtually the same process, under various guises and management, has operated right up to the present and is doing essentially the same job says a lot about the consideration given to establishing this activity.

Director-General of Forests Alex Entrican and Forest Service staff at Christmas 1960 on the steps of the office in Wellington

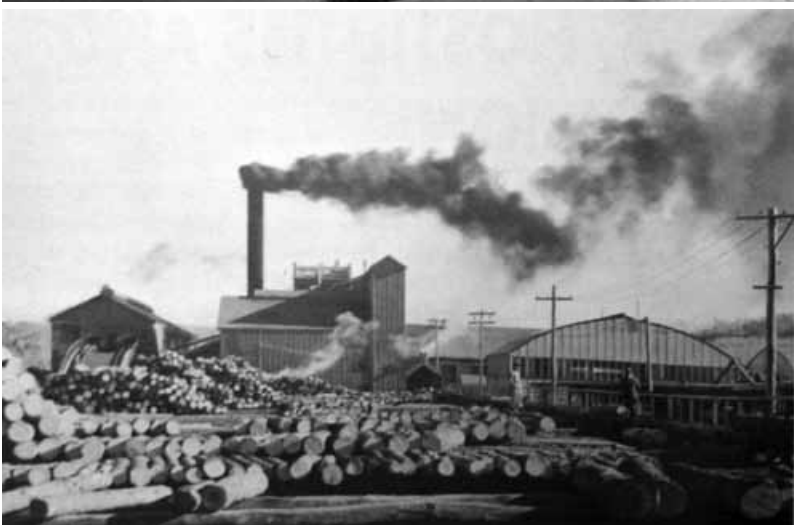


Alex Entrican, Minister Hon Eruera Tirikatene, Priestley Thomson and Tasman representatives at the new Kawerau mill

A second leg to this process was instituted a few years later when the timber inspection group was set up. Both imported wood products and our timber exports were checked to ensure the forests and forest products were not exposed to foreign pests and to protect the reputation internationally of timber exports.

Although not a professional forester, a matter about which it is sometimes suggested he was slightly sensitive, Entrican did his best for the forests. Apart from matters such as the National Forest Survey and biosecurity, he also lobbied hard to have planting rates increased, while multiple use forestry was to him vital if effective land use was to be achieved. This was a strategy which landed him in some strife with early conservation groups wanting to lock away indigenous forests, and with farming groups wanting to burn off trees to establish pasture. His efforts to implement greater control over clearing forests on private land was a particularly sore point.

A straddle truck used for moving packets of timber around the yards at Waipa sawmill, about 1945



The new Sawmill at Waipa, 1944

In the 1940s, Entrican began a campaign to reduce the cut from native forests. His first aim was to increase substitution of native timbers with pine from larger sawmills, such as those he was currently implementing at Waipa and later at Conical Hill/Tapanui. His second objective was to get price control removed from native species so that their price could rise in line with their intrinsic special purpose and decorative values. In the Forest Service *Annual Report* for 1952 he was still agitating for a reduced cut, suggesting the harvest of native forest should be reduced by 20 per cent a year until a sustainable level of harvest was achieved.

Sustainable management

The government's reaction was to set up a sub-committee of the Timber Production Advisory Committee (1953), composed largely of sawmillers, to consider conservation of indigenous timber. The sub-committee's report was presented to the Minister of Forests, the Hon EB Corbett, in August 1953. This asserted that –

...the production and consumption of exotic timbers must be expanded [but] the preservation of indigenous timber supplies is of no consequence, and conservation should consist of liquidation of the remaining indigenous resources of the North Island by existing sawmillers over a period of 25 years.

It was not until the 1970s that the Forest Service was able to bring this harvesting under a form of sustainable management. By this time many in the wider community no longer trusted its ability to deliver and commercial management of native forests in the North Island effectively ceased.

Entrican also posted foresters to what he saw as critical areas – kauri forests in Northland, silver beech forests in Southland, and beech and podocarp forests in Nelson and Westland. Management teams set up in each case were able to increase the knowledge and capability available to ensure sustained management. However, these project teams were also lost as other 'reforms' of forestry were undertaken by successive governments. Colin Bassett was a member of one of those teams.

Towards the end of my second year at the Australian Forestry School, Tom Birch wrote to tell me that I was to be posted to Hokitika and would work on indigenous forest management at Hari Hari, which he termed the strategic centre of podocarp management. I was later, on the completion of a headquarters building there, to be transferred to Hari Hari on a long-term basis. He mentioned 15 years as a desirable term because of the need for continuity. I objected to this but nevertheless did go to Hokitika, from where I worked principally at Hari Hari in the week and back to Hokitika for the weekends.

At Hari Hari, the Forest Service were trying to

introduce a better system of managing the rimu forests than the old 'cut out and get out' policy. Instead of clear felling to leave behind a desolate waste, in Wanganui State Forest they had begun a system of partial felling, with the sawmiller taking out strips of about four chains width, then leaving a strip of the same width standing. The hope was that, over time, seed would spread from the standing strip on to the felled strip, and the forest would begin to replace itself.

Years later as Director of Research I decided that selection logging research at FRI should be discontinued. The government had ruled that all State Forest logging should cease, so the main 'client' no longer required this research. Additionally, FRI itself had no logging facilities to enable us to carry on experimenting, and we would doubtless have come under public criticism had we continued. We could have been accused of flouting government policy. I was nevertheless taken to task by a prominent activist for discontinuing this research, so either way, it was a no-win situation.

The Murapura scheme

In the early years of the 1940s, Entrican's concept of an integrated sawmilling and pulp and paper project based upon the vast resources of Kaingaroa Forest and located near Murapura was raised. In 1943, a minute from the government recorded approval for such a development. An understanding reached with NZ Forest Products, who were investigating a similar proposal for their forests at Kinleith, included agreement that the Forest Service project would be based on manufacture of newsprint. Entrican envisaged –

...a new class of organisation with the character of a public corporation, in which private enterprise and the Government shall be associated.

It appears Entrican, probably intentionally, misread the views of potential private investors who had no desire to be linked with the bureaucracy. Whatever the case, it was only after a change of government late in 1949 that instructions in favour of private enterprise, as far as the operation and management of the proposed facility was concerned, were finally approved.

For Entrican, the Murapura scheme was the culmination of 30 years of endeavour. Further enquiries with a wide range of experts confirmed his advice was sound, and late in 1950 the decision to proceed with a project as recommended by the Forest Service and its advisors was approved. It was a project unprecedented in its scale and implications for infrastructure. An initial right to purchase 23 million cubic feet of logs was provided. The government also indicated its intention to spend £14 million sterling on the provision of public facilities and services – railway lines, roads, power and ports.

The government reserved the right to design, erect and operate the sawmill envisaged in the project

proposals. Entrican already had much of the necessary plant sitting at Waipa for this purpose. Ultimately the Forest Service was forced to disengage from much of the project it had conceived, including the harvest and supply of logs. Even so, as Mick O'Neill remembered –

...before and during the start-up of Tasman, in addition to purchasing and storing sawmill equipment required by Tasman, the Forest Service produced timber at both its mills carrying the Tasman brand to enable the company to commence market development. The first logging plan was produced by the Forest Service although all clear felling was to be carried out... (by the company)...Waipa technical staff were closely involved in getting the sawmill up and running and many Forest Service people were recruited by Tasman.

The very low stumpage Tasman were to pay for the State's forest resource was justified by the government and ultimately by Entrican. This was on the basis that the government retained an interest in the benefits from the project for a period and also through the likelihood that, in Entrican's words –

...the project... will in fact confer very wide general and direct benefits upon the whole community.

Jack E Henry, a senior executive in NZ Forest Products at the time recalls –

Entrican deserves credit for his push on the utilisation side... the Forest Service did a great deal towards developing the... radiata pine market... Generally there was cooperation in the market development to the benefit of all parties.

The Murupara forestry scheme was a substantive and symbolic contribution to New Zealand's post-war industrial development, and its timely achievement owes a great deal to Entrican's advocacy and focused negotiation. His willingness to involve widely and ensure strong State support until the project was running, while no longer so popular, helped produce a positive result and may still have a place in a small country requiring international scale investment.

Delegation not overdone

While the wood utilisation projects dominated Entrican's tenure as director of the Forest Service, his effect and presence were at times all-embracing. It is said that he even designed the department's Christmas cards and calendars, possibly exemplifying his reported view that 'delegation of authority can be overdone.'

He was a tall man who often wore bow ties and broad-brimmed hats with plastic covers for rain protection. An idealist who demanded excellence, he was not easy to work with. He was also not impressed with external controls which constrained his managerial authority and was not averse to expressing his opinions publicly or to Ministers. He particularly disliked the Public Service Commission, which he considered the

enthronement of mediocrity and conformity. The antipathy was mutual.

It is said that he rarely took leave and that he confessed to very long hours of work. He retired on 7 December 1961 and it is also said that he found retirement a severe trial. He died in Wellington on 21 April 1965. In an obituary published in the *Journal of Forestry* that same year (Vol 10/2) it says:

Entrican's record of achievement during his long period of directorship is an enviable one ... his keen eye and wide-ranging mind missed little in the way of detail, be it a badly graded road or an understocked compartment. A razor-sharp intellect coupled with a forceful and outgoing personality and a brittle temper to match the once-red head he could be the terror of his subordinates and the despair of his peers. History with the advantage of longer perspective will undoubtedly judge this turbulent and controversial character more objectively... than those who speak or write of him as a contemporary. But foresters everywhere, and none more so than New Zealand's will long remember a doughty fighter... striving and stimulating others to drive for the ideal in forestry, come fire, flood or politics.

Fred Allsop in his book *The First Fifty Years of the New Zealand Forest Service* wrote –

The logging, sawing and marketing techniques initiated by the Forest Service and freely made available to others have earned no small measure of credit in the success story of New Zealand exotic forestry.

There is little doubt that Entrican's drive and vision was responsible for instilling a large part of that capability in the Forest Service, and for the benefits that subsequently flowed on to the wider forestry community. People in today's thriving forest industry, remembering Entrican and other forestry stalwarts, might reflect for a moment on the modest comment of the eminent 17th century scientist, Sir Isaac Newton – 'If I have seen further it is by standing on the shoulders of giants'.

References

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Peter Berg was a General Manager in NZ Forestry Corporation, for 12 years President of NZ Forest Owners Assn, and is an author of a number of books on aspects of NZ forest history. This article was greatly assisted by material supplied by Colin Bassett.