

New Zealand's export of wood products

Chris Goulding

The 'Last Word' in this issue for May 2016, by Brian Stanley, talks about the importance of the forest sector to New Zealand. That forest products are the country's third largest export earner is well known to readers, as is the potential to earn so much more. New Zealand is the largest exporter of raw, unprocessed logs in the world; bottom ranked for processing its harvest within the country, having been overtaken even by Russia during this government's administration. The Wood Council of New Zealand, Woodco, in 2012 drew up a 'Strategic Action Plan' which set the target of achieving \$12 billion of forest product exports by 2022, now only six years away. A plan is only a plan if someone at least considers attempting to implement it, something that Woodco itself is not in a position to do, but the plan presents a vision that could be achieved. The questions are by whom and how.

Should the industry's exports increase to anywhere near the \$12 billion, this would go a long way to reducing the current account deficit of \$7.7 billion (2015). The increase in economic activity would result in an increase in the tax take, perhaps enabling the current Minister of Finance to meet his seemingly elusive dream of balancing the government's books. It would appear that the government itself would benefit most from implementing Woodco's Strategic Action Plan, although in reality so would every person in New Zealand.

The Future of Wood Processing in New Zealand – Opportunities and Barriers is the theme of this issue with three papers that cover the potential for a greenfield Kraft pulp mill, the Return on Capital Employed (ROCE) of potential industries, and the results of the latest National Exotic Forest Description (NEFD) wood supply forecasts.

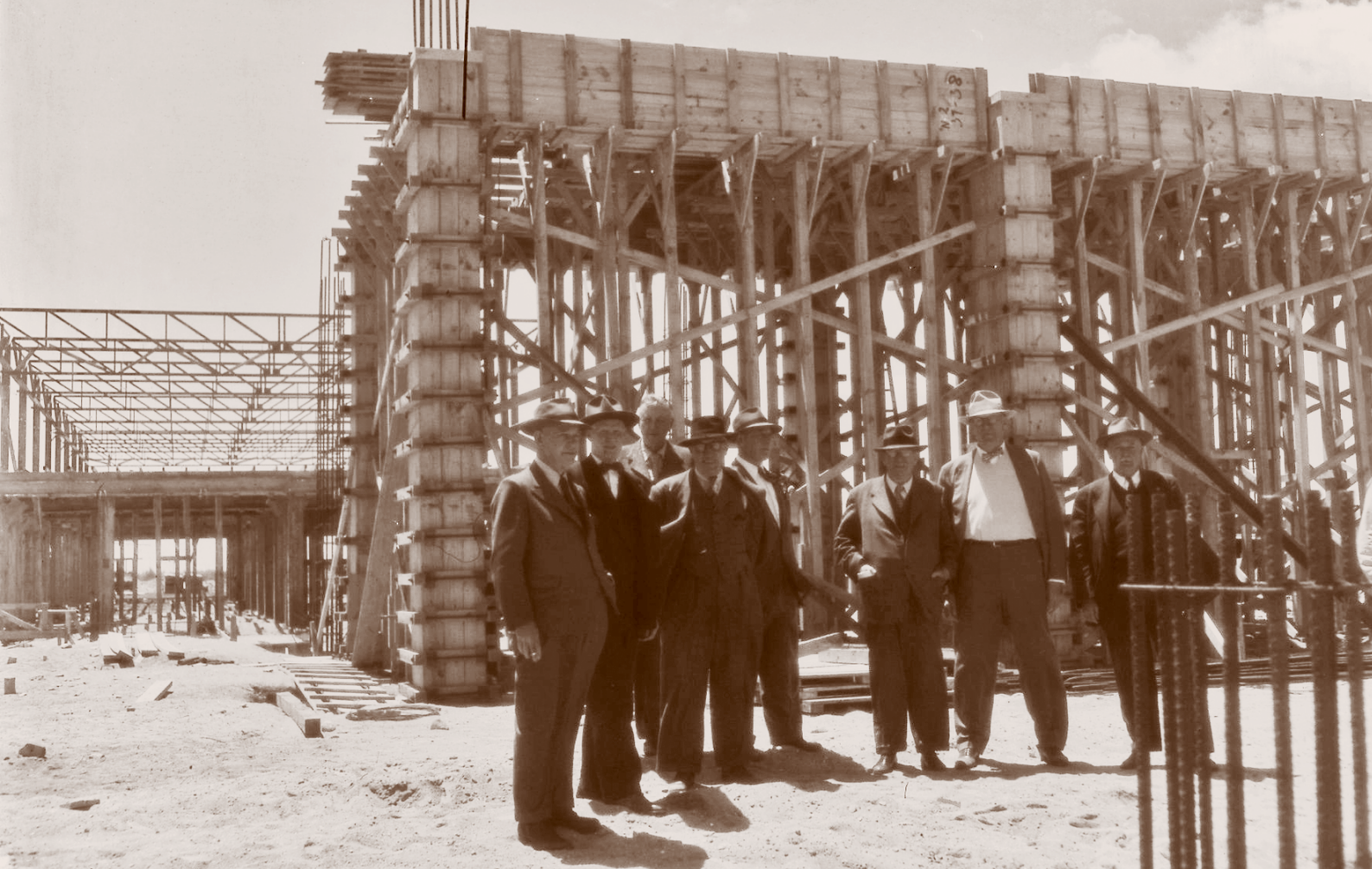
David Evison points out that while the demand for printing paper is being affected by electronic media, demand for packaging and tissue is vigorous and a new Kraft mill should be profitable. However it will only be competitive if the facility is large, with an input of 4½ million tonnes or more. Only the CNI has a regional supply of this size, and as there are already two existing Kraft mills, which presumably could be expanded, one wonders if there will ever be another greenfield Kraft mill, even if difficulties with the Resource Management Act could be overcome. However inter-regional transport has not been analysed specifically to feed a new mill. This editor started his career working where the office was adjacent to a Kraft mill in BC that was primarily supplied by ocean-going barges and log-rafts,

and water transport may be one way of overcoming regional wood supply constraints.

While the ROCE is but one of several indices of profitability, Peter Hall's paper on the WoodScape analysis indicates that it is possible to obtain ROCEs in the mid-30s from structural sawmills and plywood facilities, at current exchange rates (NZ/US\$0.65), provided the mills have sufficient scale. Such a sawmill requires 1.2 million tonnes or more log input. Oriented strand board (OSB), appearance grade and dry mills have ROCEs in the mid-20s, again provided they are of sufficient size. Foreign exchange rates are critically important for export dominated industries, which any new wood processor must be, and a return to the levels in early 2014 could cause some types of wood processing activities to move from profit to loss.

Scale of supply to any new wood processor will be critical for economic viability. Nick Chandler's paper provides an overview of the latest round of the NEFD wood availability forecasts, comparing the results with the previous round (2006/09) and with the harvest levels in the period since. Despite the loss of area due to conversion of forest to pasture, roundwood removals were higher than the earlier forecasts. Per hectare yields used in the yield tables of the latest forecasts are also higher than those used earlier – a prediction of an increase of 30% between 2007 and 2030 was made by Goulding (2005). The potential increase from the small-scale forest owner is highlighted, as is their underlying imbalanced area/age-class distribution caused by the spike in afforestation of the early 1990s.

The paper shows each region attaining and maintaining a non-declining yield (Scenario 3) when comparing the recent with the previous forecasts. This comparison does not show the decline in harvest after 2034 demonstrated in the alternate Scenario 5 where the harvest level was allowed to reset because stands would otherwise become very old due to the age-class imbalance. Assuming a 'smooth', non-declining harvest till 2050 may breed some complacency when planning for increasing domestic processing with greenfield facilities. Importantly, the paper shows that increasing proportions of logs from small-scale forest owners will be necessary to complement the large-scale owner supply when specific log types are required and the minimum log input increases with increasing facility size. The yield tables used in the NEFD analysis are averages through time and are derived from the large-scale forest owners, with little formal modification



Building the pulp and paper mill, Kawerau, 1953. Photo courtesy of Scion, New Zealand Forest Research Institute Ltd

for plantations grown on farms. It is clear that the availability of continuing wood supply will be critical in decisions on domestic processing investment. Precise geographic location of age-class distributions and accurate yield tables should be incorporated in any planning model considering plant type, location and economic viability through time.

The desirability for better analysis techniques and data should not cloud the fact that these are not the constraining factors in increasing domestic processing to the harvest percentage level of, say, Chile. When the two pulp mills and associated sawmills at Kinleith and Kawerau were financed and constructed in the 1950s, Geographic Information Systems (GIS) were not available, nor were there good yield tables to forecast wood availability. The Kinleith mill was built by NZ Forest Products Ltd, formed from Perpetual Forests Ltd and their plantations. The history and machinations are detailed by Healy (1982) and should be required reading for everyone associated with the New Zealand forest sector.

The photo was taken during the construction of the Kawerau mill in 1953 and includes Sir James Fletcher. The gentleman second from the left is A.R. Entrican, Director-General of the then New Zealand Forest Service. This mill probably would not have been built were it not for the government partnership with private industry. Entrican himself was a strong advocate for domestic processing – he caused radiata logs to be sent to the USFS Forest Products laboratory in Madison

to be tested for their pulping qualities and played an active part in supporting the mill's construction.

Nowadays, a Public Private Partnership (PPP) is a long-term contract between the government and one or more private companies to finance and construct an infrastructure asset. While PPPs typically do not include turnkey construction contracts where there is a limited or no ongoing role for government, perhaps this strict definition could be relaxed. Perhaps how the partnership between government and private industry was effected to build the Kawerau facilities also needs to be examined, in order for government to carry out their accepted role of creating the economic and social environment that allows private industry to flourish and benefit the nation.

It has been stressed to me that the Ministry of Primary Industry's role is not to be an advocate for any one primary sector, including that of forestry. Without unduly favouring one sector over another, in order for Woodco's Strategic Action Plan to gain traction and to make the Minister of Finance's dream come true, perhaps that should change.

References

- Goulding C.J. 2005. The Wall of Wood. *NZ Journal of Forestry*, 50(2): 23–27.
- Healy, B. 1982. *A Hundred Million Trees: The Story of New Zealand Forest Products Ltd*. Auckland, NZ: Hodder & Stoughton.

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30 August 2016

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- Improving Pest Management
- Fire Service Review

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Update on ETS and Carbon Market Outlook

Field trip – 1 September 2016

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31 August 2016

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- Manuka
- Essential Oil from Wildings
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Dunedin Town Hall
30 August, 31 August and 1 September 2016