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This August 2019 issue continues from the previous issue and the paper on the use of mass timber in buildings. The issue has a theme of Advances in Wood Science with two papers on engineered timber. Also in the theme, a paper on wood modification includes a discussion on New Zealand's ability to derive benefit from the commercialisation of taxpayer funded research. Again continuing from May, is a paper on the production forest sector's licence to operate, written by an author who is 'a political theorist with an interest in forestry, not a forester with an interest in political theory'.

The use of mass timber for large buildings is being held back by the lack of approved building guides. The paper by Van Houtte and Parker describes the current project to provide a set of Design Guides for engineered wood in the construction of buildings that lie outside the light timber framing code (NZS 3604). In conjunction with this paper, Buchanan's paper explores the wood properties (strength, stiffness, density, and durability) needed for large-span or multi-storey timber buildings. Despite his claim that foresters can do very little to improve wood properties, anyone remembering the 'C & D' type stands of Kaingaroa old crop radiata (untended, unimproved seed stock, often growing on the frost flats with high early mortality, resulting in widely spaced, badly malformed trees) knows that silviculture and genetics (lack of) can do a lot to degrade the wood, something to bear in mind during any discussion on new regimes.

Both papers should be read carefully by forest managers and investors so that uninformed criticism may be countered (e.g. that large-component timber in new buildings will burn like Notre Dame). To meet New Zealand's obligation on climate change, energy intensive steel and concrete, used in the majority of today's non-residential construction, must be replaced by timber.

Franich describes the New Zealand Forest Research Institute Ltd research some years ago on wood modification (wood hardening); its theory, chemistry and commercialisation. The intellectual property was acquired by a UK company and production of hardened radiata timber in New Zealand ceased. He asks whether the taxpayer obtained a good return on the science investment quoting an industry leader saying that the process was given a good try here, but that New Zealand is too small and too far from markets – 'stick to log exports'. Does this apply to all of the more technically advanced wood product manufacturing? He also asks whether, in an increasingly 'chemi-phobic market' it may better to grow a variety of timber species that naturally have the desired physical properties.

Hall's paper on social licence gives an in-depth discussion on what it is. He states that it is inherent to modern political systems, to the extent that it is easily overlooked. Its importance is likely to increase, especially with the empowerment that the internet and social networking can achieve. The editor argues that the disestablishment of the New Zealand Forest Service, the removal of virtually all logging in indigenous forests, and the sale of state owned plantations must be a classic case of loss of social licence. The sale of state forests to the same extent did not happen in the US or Britain, despite the latter's government trying hard to do so, twice. Hall argues that today New Zealand plantation forest practices face an increasing risk of loss of social licence. This is partially because of resistance to increasing areas of plantations in existing farming communities, but also due to the sector's 'own-goals' with logging debris. His comments on transforming uniform-age, clear-felling radiata pine to a Continuous Cover Forestry silvicultural system demonstrate that the sector needs to take that risk very seriously.

Mason discusses estimating mean top height in New Zealand, where if only a very few heights are measured in each inventory plot to estimate a common height diameter curve, the precision of the estimate of mean top height will be less than the routine calculations indicate. The underlying problem lies in the generally poor relationship radiata has between height and diameter, unlike many overseas species, so that measuring the heights of more trees will improve calculations. Whether this will result in better information leading to improved profitability will be the focus of new research.

Research into tōtara heartwood, which is naturally durable, is described by Steward's paper on the amount to be found in immature trees. Its presence was highly variable, but with variability decreasing with increase in stem diameter and predictability being better at the stand level than individual trees.

Manley's note details results from the 2018 Interim survey of discount rates used in forest valuations.

The Last Word is provided by Lausberg, sharing Purey-Cust's view in the May Last Word that being so dependent on radiata is high risk.

Post script. The editorial and Casey's paper in the February 2019 paper commented on the increasingly rapid development of 'clean' meat. Burger King is now serving an 'impossible burger' in the US and KFC have announced the equivalent with their chicken in the UK.



# Fronting a renewed forestry focus

**The past year has been an eventful year for our forestry sector, we have moved from the shadows into the spotlight, and, moving forward, the light is likely to keep shining brightly on our sector.**

Te Uru Rākau (Forestry New Zealand) is excited to be able to help drive this momentum and enable forestry to further improve social, environmental and economic outcomes for New Zealand.

Te Uru Rākau was officially stood up by the Government as a business unit within the Ministry of Primary Industries in May 2018, to lead the Government's renewed focus on forestry, and to strengthen and grow the forestry sector in New Zealand.

To do this we are building a strong and dedicated regional presence providing an opportunity to work even more closely with landowners – particularly Māori and farmers – to revitalise our regions.

There is no substitute for being on the ground where the action is, which is why we will be building a new premise in Rotorua, where we can work in close partnership with the sector.

One of Te Uru Rākau's key roles is to support the Government's One Billion Trees programme.

The One Billion Trees programme is leading the way in transforming New Zealand's forestry sector. The programme's backbone is right tree, right place and right purpose.

This equates to reduced carbon emissions, improved water quality, erosion control, enhanced regional development, being able to support Māori in realising the potential of their land and the creation of new jobs.

Through the Emissions Trading Scheme, National Environmental Standards for Plantation Forestry, and administration of the Forest Act 1949, we are working to create a supportive regulatory environment to support the sustainability of the sector.

Moving forward we want to continue to leverage the good work that has been done by industry.

We will be standing up a new team responsible for implementing a workforce strategy in partnership with the sector to provide sustainable jobs, training and clear career pathways.

Other priorities include:

- developing a modern Forestry Strategy setting the strategic direction for the sector for the next 20 years;
- reviewing the Forest Act 1949 to reflect developments in domestic and international approaches to sustainable forestry management;
- researching factors affecting the wood supply for local wood processors;
- providing better access to research and information to support landowner decision-making.

Being in the spotlight naturally comes with its own set of challenges. Opinions become more divided and misconceptions are rife. For those of us who work in the forestry sector we need to tell our stories better so that the benefits of the work we do are clear.

We are excited about what we, together with the wider forestry sector, will achieve in our second year, and every year thereafter. As we work towards transforming forestry for the better, we will ensure that we continue to communicate what this transformation means both within the sector and to the wider New Zealand community.

We look forward to meeting many of you at the ANZIF conference, answering any questions you may have and discussing how to best grow the future of our forestry sector together.



**Julie Collins**  
Head of Te Uru Rākau