

Northland totara: sustainably managing a native forest resource in New Zealand

Pilot project a financial model for a viable business opportunity in the region

MICHAEL SMITH

THE last two years have been witness to some exciting times in the New Zealand Northland as the Totara Industry Pilot (TIP) project undertook an investigation into the business case for a sustainably-managed farm-totara industry.

With the TIP's report due to be released shortly, Timber&Forestry enews took the opportunity to talk with Paul Quinlan from the Northland Totara Working Group (NTWG) and Tane's Tree Trust – a TIP project partner.

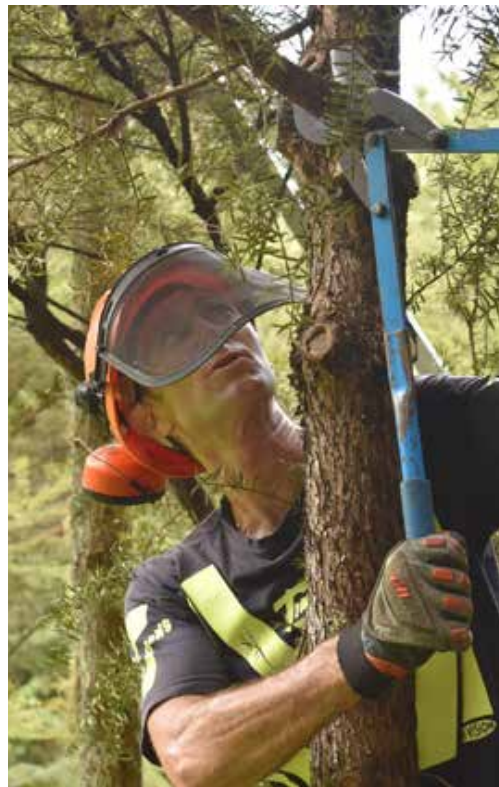
Paul says low-impact selective harvests of naturally generating totara could be undertaken within existing stands of farm-totara on private land in the region – in direct contrast to clear-fell plantation forestry models.

The TIP project's most recent trial harvest involved the recovery of 200 cub m of totara sawlogs from three farms in the Far North ... using continuous cover forestry (CCF) principles.

"This practical pilot enabled a financial model to be tested and confirmed a viable business opportunity for the region, with stakeholder engagement revealing high levels of interest in the project," Paul said.

He is keen to emphasise

“A FOREST STRUCTURE OF MIXED SPECIES



Paul Quinlan... working with nature 'to regenerate and create a locally appropriate native forest resource'.

Photo: Katharina Quinlan



The second trial harvest... processed at Northpine's Waipu sawmill.

Photo: Paul Quinlan

that CCF is an umbrella term for a range of specific management approaches – for example, close-to-nature forestry, coupe-felling and shelterwood systems.

"Different species and forest types suit different applications or weightings of these principles," he says.

"Our harvesting applies the German 'Plenterwald' forest

management approach. This seeks to create a forest structure of mixed species, and with the full range of size-classes – such as tall, large-canopy trees with their potential replacements of pole-sized trees in the subcanopy, and with saplings and seedlings in the understorey, all standing close to each other.

"The system suits single-stem selection and extraction, and forests that include many shade-tolerant tree species. To some extent this approach is directed by the Forests Act, which specifies the harvesting of podocarps only as single stems or in small groups of three to five trees.

"However, totara is a light-demanding tree, and it is yet to be proven that this management system will result in enough light at harvest sites for good totara regeneration. It's likely that the shade-tolerant hardwood trees will benefit from this approach to harvesting and, over time, the forest will become increasingly species diverse and more 'natural' in composition.

"A coupe-felling system, as is used with sustainable beech forestry (where harvesting creates very small clearings), may better suit totara regeneration. But, at present, that is not provided for under the Forests Act."

Because of the small-scale nature of the trial harvests,

Cont P 16

From P 14

Paul Quinlan says it was a challenge finding experienced crews.

“Many harvesters have equipment and machinery that is ill-suited to getting around farm tracks with tight races and sharp corners into narrow gateways,” he said.

“Our harvests involved careful directional felling, winching out logs, cleaning up slash and long skidding distances – as well as the loading of log trucks. The work was complicated by fence lines and steep terrain.”

He adds that different machinery combinations were trialled ... beginning with a 22-tonne excavator with a grapple attachment and an eight-wheel-drive, self-loading John Deere 1410 forwarder.

The second harvest used a D4TSK skidder with 30 m of wire rope for extraction and



The harvests trialled different machinery combinations using continuous cover forestry principles. Photo: Paul Quinlan

a 22-tonne grapple digger to load the log truck and trailers. Getting the forwarder through the farm gateways proved difficult ... with a few insulators bruised off some fence lines.

Paul said while at the time of harvest it appeared some damage to the paddocks had

occurred, within six weeks the grass had regrown.

A most pleasing aspect

“DAMAGE TO THE RESIDUAL FOREST WAS LIMITED

was the post-harvest assessment, which found that damage to the residual forest was limited to a few broken branches of adjacent trees.

“These harvests demonstrated that low-impact selective harvesting is certainly possible in these farm-totara stands,” he said.

• In an upcoming edition we will analyse the soon-to-be-released TIP project report's findings and talk further with Paul Quinlan about efforts to more accurately gauge Northland's totara resource.

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