

# FILE NOTE

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**Subject:** Thinning and sample collection in Cypress clonal trial on the Paparoa RD site  
**Date:** 27 November 2023  
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## INTRODUCTION AND STATUS

In 2011, Scion produced a series of hybrid clones with imported pollen from superior selections made from *C. Nootkatensis*, the Alaskan Yellow Cedar. This pollen was used to make hybrid crosses with the best available strains of *C. Macrocarpa*, *Lusitanica* and *Guadalupe* cypress. The purpose was to make hybrids that inferred the cypress canker resistance that is apparent in *Nootkatensis* and has the added advantage of renowned durability of its heartwood in the timber. The best performing of these were selected at a young age (less than five years) for their ability to strike root from cuttings.

Paparoa road trial site was planted in 2015 with 30 separate clones in 89 tree blocks (9x9). Assessment of this planting was made in 2019 at a basic level by the Cypress Development Group of NZFFA. It consisted of diameter and height recordings as well as visual assessments of branching architecture and any signs of cypress canker. Silviculture had been minimal at that point, and nothing further was done until this 2023 assessment was carried out.

The project plan was to collect log samples for strength and durability testing at Scion, to see if there was potential to make early calls on potential superior clones for these attributes.

Thinning was carried out and sample logs were delivered from the 8-year-old trees to Ruapehu Sawmills, where they have been sawn into 100 x25 mm boards and placed in fillet to be seasoned for strength testing. Minimal heartwood was apparent in the logs, so no durability testing will be possible at this young age.

Because the trial site had undergone no silviculture in the lead up to the assessment, it became obvious that considerable work would be required to make the stand viable for future research. To this end, the project team has embarked on a major rejuvenation which involved thinning of 25% of the stand and high pruning to 90mm stem diameter of the remaining trees.

The large majority of the felled and pruned material has been fed through a chipping machine on site to enable future researchers to access all parts of the stand for further growth and form assessments. The five best performing clones, for growth, health, and form, from this site have been identified and now further work will be necessary to upscale availability of these clones for the cypress forest growing sector.

Images of the Silviculture work are attached.

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Above is part of the stand as it was in May of 2023.

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Pictured here is Simon Rapley of the NZ Redwood Co. who adds a sense of scale to the 8-year-old hybrid cypresses.

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This part of the site was a mass of blackberry and required some work to make it accessible.

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Trees after clean-up

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Pictured is the end of a felled tree of the Henry clone.

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In this image, one can see a distinct difference in the growth rate of two separate clones growing adjacent to each other.

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After pruning and chipping.

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Log extraction was achieved with the use of a buggy inside the stand once cleared of low branches.

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Large piles of chip were produced by the chipper. The stand is now easily accessible for further assessments.

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Sample logs leaving the stand to be sawn.

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Another view of under the stand after thinning, pruning and chipping