Difficulties managing regenerating tōtara under Part 3A of the Forests Act

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Figure 1: Naturally regenerating tōtara sporadically establishing in a pastoral landscape. Where is the forest boundary?

Abstract

This paper describes problems experienced by members of the Northland Tōtara Working Group with some of the provisions and interpretations of Part 3A of the Forests Act. Three examples of regulatory issues and difficulties are outlined: 1) Mapping requirements and the exclusion of trees outside of native forest boundaries; 2) No allowance to change a developing forest's structure and composition; and 3) Inconsistent and unreasonable export controls.

While not a complete record of regulatory issues, in our opinion these problems highlight some inadequacies with the Act, particularly a lack of provision for new and diverse forms of naturally regenerating native forests in rural landscapes. This leads us to the conclusion that an overhaul of this regulatory framework is required to better promote and support sustainable indigenous forestry on private land.

Introduction

Lowland tōtara (*Podocarpus tōtara*) that has naturally regenerated on land that has been cleared and farmed can be observed in many regions of New Zealand (Bergin, 2001; Simpson, 2017). It is particularly abundant in Northland, where farmers often view it as a weed because it invades rough pasture and reverting scrubland and can significantly reduce the effective area of pastoral grazing (Quinlan, 2009). Regenerating tōtara is often cleared along with scrub reversion for that reason.

The Northland Tōtara Working Group formed in 2005 to explore the potential for naturally regenerating

tōtara on private land to be productively managed for a sustainable native timber supply (Moodie et al., 2007). Part of the motivation was to try and turn what is often viewed as weed into a productive asset and thereby encourage the retention and sustainable management of this regenerating native forest within rural production landscapes. Indeed, success as a viable land-use option might even encourage further expansion and integration of this new native forest into farmland and plantation forestry areas.

Unlike native trees planted outside of existing indigenous forests, the harvesting for milling of any naturally established native trees is subject to Part 3A of the Forests Act 1949, particularly through the amendments made in, and after, 1993 (here on referred to as Part 3A). Members of the Northland Tōtara Working Group have experienced difficulties applying the provisions of Part 3A to this type of regenerating native forest. Furthermore, a restriction within the Act significantly limits access to export markets for processed and manufactured tōtara timber products. These issues raise questions about the fundamental suitability of this regulatory framework.

This is not the first time issues with the Act have been identified. Devoe and Olson (2001) suggested Part 3A is too prescriptive and narrow in regard to good indigenous forestry silviculture.

Part 3A of the Forests Act

The harvesting, milling, and exporting of indigenous (native) timber is managed under Part 3A of the Forests Act. Where timber is milled from privately-owned, existing or regenerating indigenous (native) forests, the Forests Act requires those forests to be managed and harvested sustainably. Te Uru Rākau – New Zealand Forest Service (part of the Ministry for Primary Industries) administers the Forests Act.

Section 67B of the Forests Act sets out: 'The purpose of this part [of the Act] is to promote the sustainable forest management of indigenous forest land.' The Act defines Indigenous Forest Land as 'land wholly or predominantly under the cover of indigenous flora.' And sustainable forest management as 'the management of an area of indigenous forest land in a way that maintains the ability of the forest growing on that land to continue to provide a full range of products and amenities in perpetuity while retaining the forest's natural values.'

Promoting, providing for, and requiring such sustainable management of naturally occurring indigenous forest is consistent with good land stewardship and kaitiakitanga. The general purpose and intents of the Act are not an issue of disgruntlement. Sustainable Forest Management

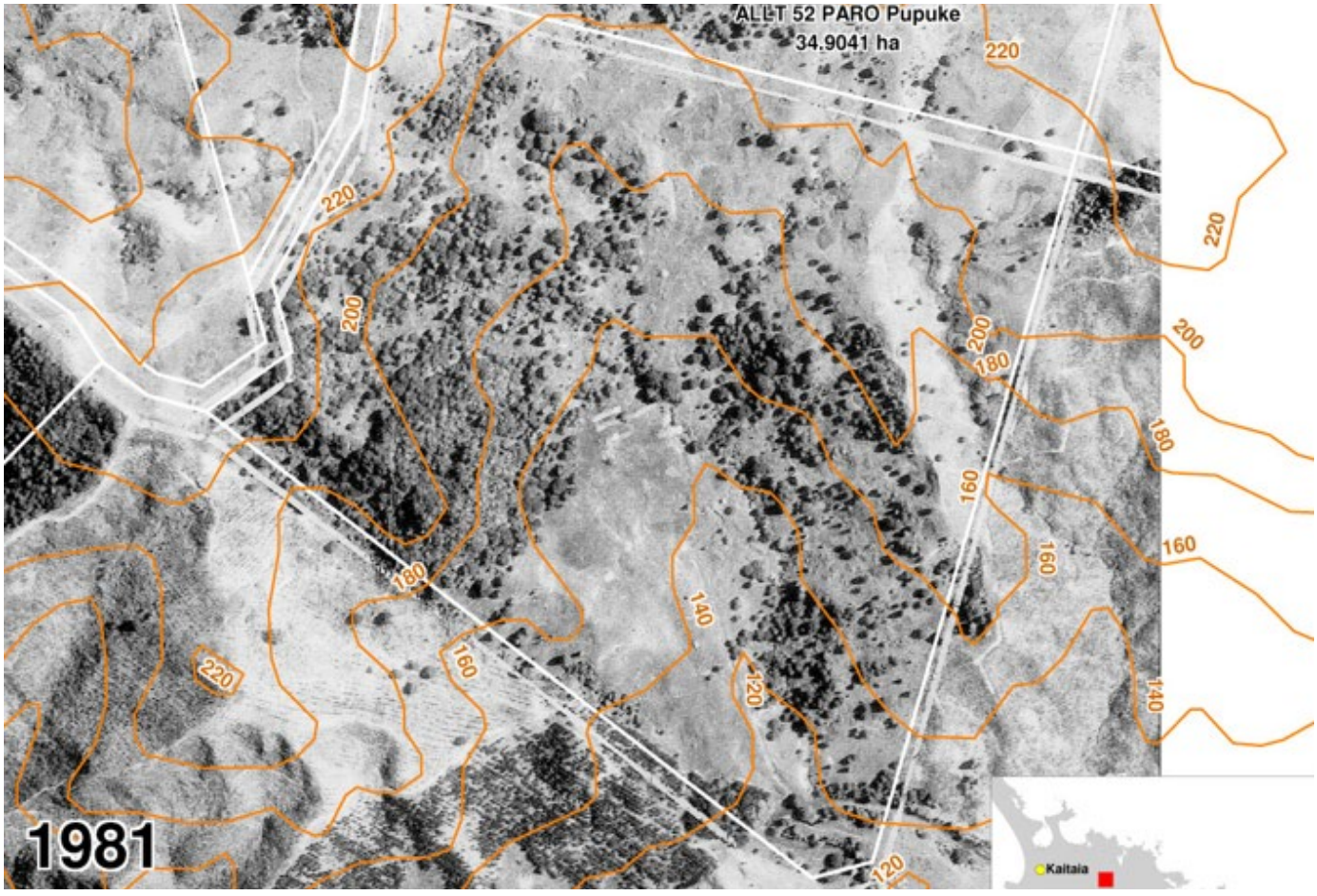

Figure 2: An aerial photograph taken in 1981 of a 35 ha block (land parcel in centre view), which is part of a large sheep and beef farm at Mangapa, in Northland. An analysis estimates 39% area cover in trees – predominantly tōtara

Permits and Plans (SFMPs) are provisions, under Part 3A of the Act, that enable some sustainable harvesting from native forests on private land.

Native forests that have been planted on land that is not already indigenous forest land can be exempted from the sustainable management requirements of the Act. Together, these provisions reasonably attempt to provide for and control the sustainable management of natural forests, without discouraging the planting of native plantation forestry and woodlots. However, as often occurs, 'the devil is in the detail'.

Mapping difficulties and eligible land

The SFMPs have been successfully applied to many discrete areas of native forest on private land. The indigenous forest areas are required to be mapped and those maps included as part of the SFMP and registered on the land title. Technology such as satellite imagery and mapping software make this a practicable and affordable process for many distinct areas of native forest. However, these days, naturally occurring native trees and forests are often not just restricted to spatially discrete and distinct areas that meet the tidy definition of Indigenous Forest Land used in the Forests Act.

As ripple effects from our historical and contemporary land-use modifications and activities play out, our changing landscapes are in places increasingly 'messy' in their ecology and character. Native trees are naturally establishing themselves beyond the boundaries of remnant native forests and occupying spaces that blur the conceptual dichotomies of forest remnant versus farmland, natural versus modified, and native versus exotic. Also, importantly, this evolving reality is occurring at significant scale. The developing resource of naturally regenerating tōtara on private land in Northland (Kennedy, 2007), and other regions (Simpson, 2017), is one example.

The remarkable abundance of tōtara on farmland and previously cleared land has a relationship to historic land disturbances and the prolonged and modifying influences of farming activities. Tōtara is relatively resistant to browsing by livestock and stands of tōtara can naturally establish within grazed environments (Bergin & Kimberley, 2014). The seeds are spread by birds, and a sporadic and spreading distribution of individual seedlings, thickets, and small stands often develops within paddocks and disturbed forest areas. Moreover, their continual growth poses challenges for mapping. For example, a comparison between Figures 2

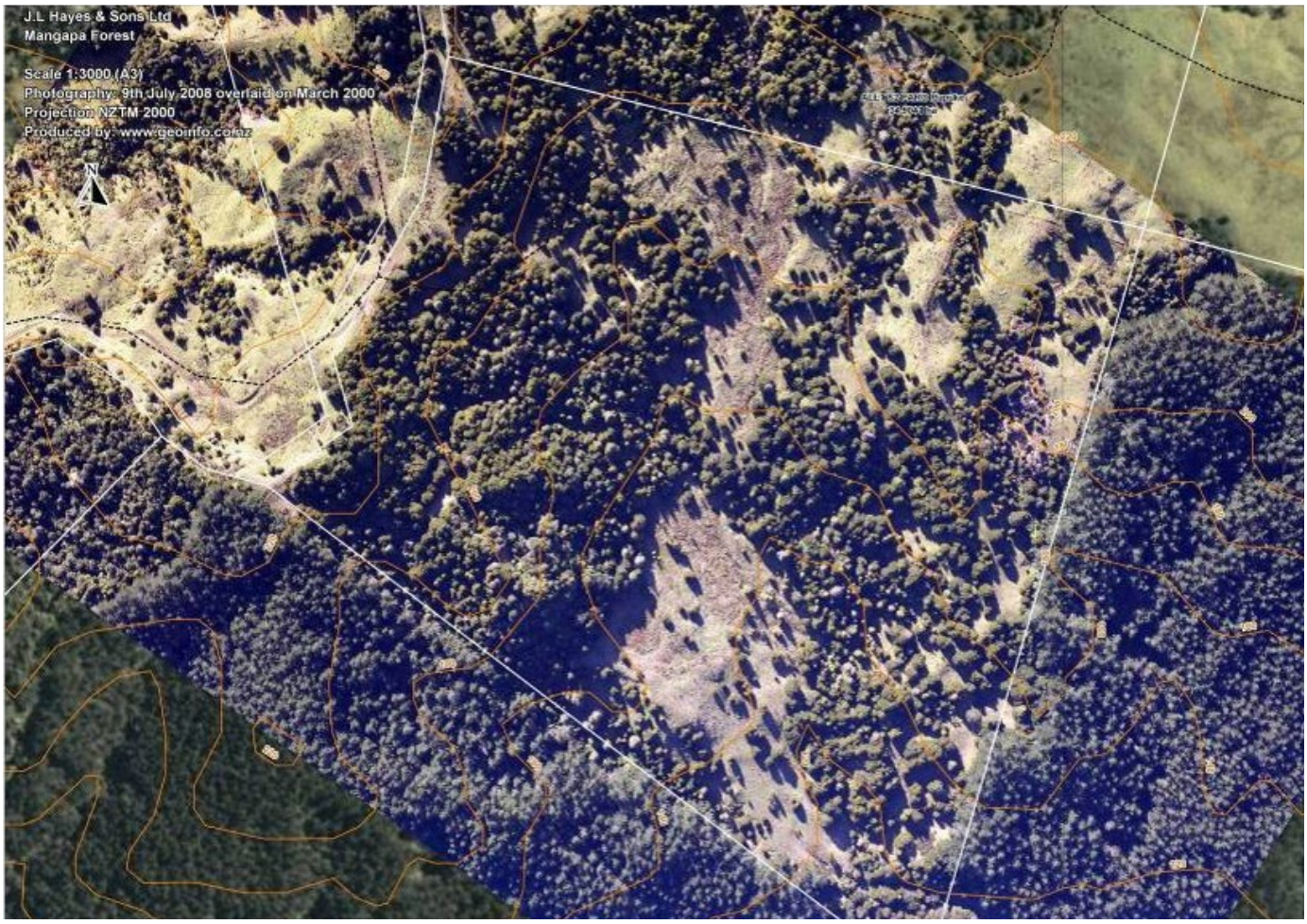

Figure 3: Analysis of a photograph of the same parcel area (from Figure 2) 27 years later (2008), with an estimated 61% cover of regenerated trees – predominantly tōtara. Mapping the evolving tōtara forest as being spatially discrete from farmland for the purposes of SFMPs under the Forests Act is highly problematic

and 3 shows an increase from 39% to 61% in area covered by tōtara forest in a paddock over a 27-year period.

Although this is a highly modified type of native forest, which could arguably be considered a 'novel ecosystem', the potential for silvicultural management and harvesting of the farm-tōtara resource for a sustainable supply of timber has been well demonstrated (Cown et al., 2009; Dunningham et al., 2020; Quinlan, 2024).

However, the spatial characteristics of this naturally regenerating native forest type often prove difficult to map into discrete permanent 'forest areas' as required by the SFMP provisions of Schedule 2 of the Forests Act. What is forest and what is farm? Boundaries quickly become arbitrary for a moving invasion wave. While the well-established stands can be mapped, the trees regenerating outside those forest areas cannot be utilised.

Such issues are not restricted to regenerating tōtara. John and Rosalie Wardle, on their property Woodside, near Oxford, apply a unique management approach to 27 ha of Monterey pine (*Pinus radiata*) that John calls target-diameter-harvesting. This is a form of continuous cover forestry (CCF) that reflects their preference to avoid clear-fell plantation forestry on this site. They also manage 70 ha of black beech (*Fuscospora solandri*) forest according to a Sustainable Forest Management Plan, as provided for under Part 3A of the Forests Act. However, the black beech is naturally invading the pine forest, particularly on the better soils and in the shadier gullies.

John has found that the beech regenerating in this situation can be pruned and managed to produce harvestable trunks of 45 cm diameter at breast height (DBH) in about 45 years. Moreover, he is confident this style of close-to-nature forestry could result in a mixed-species, uneven-aged forest – even a transition to native forestry in places.

However, there is a significant disincentive for the Wardles to allow this to happen (Quinlan, 2025a). Although they can sustainably harvest the black beech from within their native forest area, the Forests Act does not provide for the sustainable harvest of the same species naturally regenerating within their commercial exotic CCF forest. Unless areas can be defined as indigenous forest and discreetly mapped as such, SFMPs cannot be applied.

This presents something of a Catch-22 situation. All naturally established native trees managed for harvest and milling are subject to Part 3A of the Forests Act, but it cannot be applied to all such trees. A possible workaround for this problem exists for forests planted after 1989 and registered in the permanent category of the New Zealand Emissions Trading Scheme. However, that is only an option for that currently narrow set of circumstances.

There are some perverse outcomes associated with this problem. It renders the regenerating native trees outside of existing native forest areas, as unproductive elements within the rural production landscapes. John Wardle resorts to controlling the regenerating natives within his exotic CCF forest with herbicide, because otherwise they would supplant the pine in places, yet cannot be legally milled.

Similarly, many farmers in Northland view regenerating tōtara as a weed problem rather than an asset. Furthermore, many landowners fear that regenerating native vegetation on their land might be mapped as a Significant Natural Area (SNA) in District Plans and in turn restrict their future land-use options and land value.

Sustainable forest management prescription

The second set of issues relate to the presumptive sustainable management prescriptions applying to Sustainable Forest Management Plans set out in Schedule 2 of the Forests Act. Again, it appears the authors only envisaged their application to mature native forests. The prescriptions may not be appropriate for all regenerating native forests. For example, Schedule 2, Clause 10, 2 (b) states:

> ***10 Sustainable forest management prescriptions***
>
> *2 (b)*
>
> *podocarp and kauri species shall be harvested only by single tree or small group harvesting using low impact techniques. Harvesting shall, as far as possible, be restricted to the selective removal of trees predisposed to windthrow or early death. Throughout the term of the sustainable management plan, the character and structure of all parts of the forest shall be maintained:*

The second sentence restricting harvest selection to 'trees predisposed to windthrow or early death', reflects a presumption that the subject forest is mature – possibly even an old-growth forest. In young regenerating tōtara forests very few trees, if any, fit that selection criterion. Production thinning and/or selection to favour the long-term development of future crop trees is arguably a far more appropriate approach to sustainable harvest tree selection. However, that is not explicitly provided for.

The first sentence specifies 'single tree, or small group harvesting' for podocarps and kauri. (The Ministry for Primary Industries (MPI) interprets 'small group' as three to five trees.) This may be suitable for the gap-phase regeneration pattern of rimu, which was probably the main podocarp species targeted for harvesting in the 1990s, but tōtara is a much more light-demanding species (Burns, 2012).

Observations and post-harvest assessments following the Tōtara Industry Pilot project raise doubts that such limited harvests create sufficient disturbance to ensure the regeneration of tōtara in the harvest gaps. Indeed, observations and assessments of regenerating seedlings around harvest stumps found shade-tolerant native hardwood seedlings

predominate wherever grazing is excluded. What is the evidence base to suggest that small coupe-felling wouldn't be a sustainable harvest system for regeneration of farm-tōtara? Indeed, the requirement for single stem selection may make the specification of the third sentence (above) impossible.

The third sentence presumes the existing character and structure of a forest is already the most ideal and should necessarily be maintained – and can be. However, this may not be the case for a young, untended, but developing forest in its early successional phase. The character and structure of regenerating tōtara forests will inevitably change through the process of natural succession.

Furthermore, changes may even be desirable. For example, many regenerating tōtara forests have an almost monocultural and relatively even-aged character, and the dominant trees may be poorly formed with little merchantable sawlog volume and/or low value. Interventions that significantly change the structure and character of the forest to improve the longer-term timber production potential and the ecological values, including species diversity, may be possible. Yet, technically, the Act does not appear to allow any such changes, even if they would result in enhancements to highly modified and rapidly changing forest type and structure.

In respect to many regenerating tōtara forests, it makes sense to have the freedom and flexibility to influence and even fundamentally change the developing character and structure of the forest. Such changes could conceivably enhance many timber and non-timber values for future generations, including biodiversity values (Barton, 2008).

A number of other regulatory difficulties have been experienced, such as poor integration with District Plan rules under the Resource Management Act 1991. However, only the issues with the export controls within the Forests Act are outlined below.

Export controls taken to an extreme

The Forests Act appropriately prohibits the export of raw logs or chipped native timber. The logic behind this is both easily recognised and agreeable. However, section 67C goes much further and precludes the export of certain products – even processed ones. Clause (b) appears to reasonably allow the export of 'any finished or manufactured indigenous timber product, regardless of the source of the timber used in the product.' Yet the Act's definition of 'finished or manufactured' turns out to be so extreme that it precludes many products that have been domestically processed and manufactured to a level that has added considerable value.

A recent article in the NZ Farm Forestry Association *New Zealand Tree Grower* magazine (Quinlan, 2025b) documented the frustrations of a domestic furniture manufacturer prevented from servicing an export market for laminated tōtara bench tops. The definition in the Act requires an indigenous wood product to have:

> '*been manufactured into its final shape and form and is ready to be installed or used for its intended purpose without the need for any further machining or other modification.*'

Further on, it lists examples of items that would or wouldn't qualify.

Completed components for joinery, furniture, toys, tools, and toilet seats, would be okay, but furniture blanks, and joinery blanks, are not. This definition seems to focus solely on the word 'finished' and ignores the word 'or'. It unreasonably conflates manufactured with finished. A laminated bench top is hardly any less manufactured than a toilet seat. Nevertheless, MPI advised that laminated tōtara benchtops are considered blanks and therefore cannot be legally exported.

This example represents a lost opportunity for a lucrative export market to support the development of a new regional industry in Te Taitokerau, Northland, based on sustainably managing a type of regenerating native forest. It is hard to see how this serves the purpose of the Act (to promote sustainable forest management of indigenous forest land). Moreover, there is an illogical inconsistency within section 67C that makes this extremely conservative definition above quite ridiculous.

An illogical inconsistency

While the Act prohibits the export of laminated tōtara benchtop blanks, if they were made from rimu or beech then it would be allowed. In fact, 'any grade of sawn beech or sawn rimu (other than wood chips)' could be exported (under section 67C, 1(a)) – even rough-sawn boards or slabs. This inconsistent treatment of species is particularly illogical considering the obvious abundance and phenomenal regeneration capacity of tōtara in Northland and many other regions. The history to this surprising clause is presumably more political than ecologically based.

There is no logical reason to limit the allowable species to just rimu and beech. Protection of the forest, sustainability, and the purposes of the Act are all ensured and controlled by the requirement for the timber to be sourced from MPI approved SFMPs. This should be an effective guarantee of sustainable management regardless of the species.

This situation could easily be alleviated by either amending section 67C(a) of the Act to include all species – not just rimu and beech, or by more reasonably defining 'finished or manufactured indigenous timber product'. However, either remedy would require an Act of Parliament, which is highly unlikely to occur anytime soon.

The damaging effects of this legislative impediment are significant. It artificially limits the potential market and demand for tōtara timber. Yet markets are key to industry development. This leaves the development of a Northland tōtara industry languishing once again.

Discussion

The difficulties experienced in applying the SFMP provisions of the Act to regenerating tōtara forests on farms probably reflect an oversight by the authors rather than any fundamental flaw with the purposes and intent of Part 3A of the Act. The SFMP provisions clearly envisaged being applied to areas of mature or old-growth indigenous forest. They do not explicitly provide for naturally regenerating native trees and forest types in highly modified environments, or as novel ecosystems. Nevertheless, it is important to state that SFMPs have been successfully applied numerous times to such forest types, albeit rather awkwardly.

Furthermore, the Northland Tōtara Working Group members have found the government administrators of the Act (MPI) not only understanding, but also extremely helpful and supportive. However, they are still legally bound to administer the wording of the Act.

Section 67J provides some limited scope to exempt SFM plans from complying with unreasonable or impractical provisions of Schedule 2. It would be interesting to see how far that discretion can be stretched. Although that may be a useful and pragmatic interim measure, ultimately, more specific and suitable provisions within the Act would be preferable.

Conclusion

The experiences related above highlight that although the SFMP provisions under Part 3A of the Forests Act can be applied to regenerating tōtara forests, the present situation is far from ideal. This leads to the conclusion that a fundamental overhaul of the regulatory framework pertaining to native forestry is required, including the export controls.

Meanwhile, the lack of specific provisions to accommodate naturally established native trees outside of native forest areas and environments will continue to undermine the purpose of the Act to promote sustainable management of indigenous forest on private land. It also disincentivises the further integration of naturally regenerating native flora into the production landscape – often leading to perverse outcomes.

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