

PINE NO MORE

A regenerating stand of native plants in the former Maungataniwha pine forest, part of a conservation project that aims to convert a 4000ha pine plantation back to regenerating native forest.

New Zealand's largest pine-to-native forest regeneration project has reached a major milestone, as **Peter Heath** explains.

The last pine trees have been felled in a major Hawke's Bay conservation project that aims to convert a 4000ha pine plantation back to regenerating native forest.

More than 3500ha of the Maungataniwha pine forest have now been logged since 2006 and are now in the process of being re-converted back to native forest by the landowner, Simon Hall, chairman of the Forest Lifeforce Restoration Trust.

The conversion of the Maungataniwha Pine Forest is the largest project of its kind in New Zealand.

"It's the end of an era, the pine forest had provided livelihoods for many people, from planting it to managing and harvesting it. But I'm pleased to be able to start completing the process of returning it to its natural state," says Simon Hall.

The land lies next to the Maungataniwha native forest, a 6120ha swathe of New Zealand bush straddling the ridge system between the Te Hoe and Waiau Rivers in northern Hawkes Bay, bordered to the north by Te Urewera and to the west by the Whirinaki Conservation Forest.

There is enough native species seed in the soil to enable natural regeneration, but the major challenge (and cost) is the elimination of regenerating pine seedlings, which crowd out the slower-growing native forest species.

The grasses are the first to take hold, native species such as hookgrass and toetoe, then shrubs or small trees such as mahoe and wineberry. These are followed by

mountain cabbage-tree, kānuka, and native fuchsia. Once these species have recolonised the land, the stage is set for larger trees such as red and silver beech. Native birds, including kererū and silvereye, play a vital role in the regeneration.

It takes a decade to clear logged land of wilding pines completely and to get it to the point where it can be described as fully regenerated. During this time, the land is nurtured, treated, and monitored by the trust.

About a third of the area, 1400ha, can now be described as clear of regenerating pines and successfully regenerated with native species.

The trust, which was established in 2006 to provide direction and funding for the restoration of threatened species of native fauna and flora in forests within the Central North Island, uses a mix of aerial spraying and manual clearance methods.

The Department of Conservation is interested in the trust's land stewardship methods and the spray mix used to encourage the growth of native plants while inhibiting these "wilding" pines.

"Conservation in New Zealand is no longer the preserve of government agencies, the job's too big and complex. Everyone has a role to play, ideally working together as much as they can," adds Simon Hall.

"We've been very grateful for DOC's support. It's been vital to helping us get the job done."

LIFEFORCE CONSERVATIONIST

Long-time Forest & Bird member Simon Hall, executive chairman of Tasti food manufacturing company, owns 23,762ha of forest in Hawke's Bay that he has dedicated to the rejuvenation of New Zealand's natural environment.

An avid hunter and trapper, Simon looks at the wilderness as his playground. But instead of a beachside bach, he picked up Maungataniwha, his own piece of native bush, for "a very good price".

"The average person doesn't appreciate native forest so there is no competition. They don't realise the true value of the land," he says.

Hall, who has been a member of Forest & Bird for nearly 20 years, established the Forest Lifeforce Restoration Trust in 2006 to turn his land into a sanctuary for New Zealand's native environment, funded by Tasti dividends. Major initiatives to trap and poison predators have allowed native species to return in significant numbers.

The trust also runs several other restoration projects including boosting the wild-grown population of kakabeak (see right), providing a secure breeding habitat for whio/blue duck, undertaking various pest control and eradication initiatives, and assisting with the re-introduction of forest birds to previously abandoned habitats. It's also carving out a name for itself as one of the most prolific and successful kiwi conservation initiatives in the country.



Simon Hall, of Forest Lifeforce Restoration Trust.



One of the kakabeak being propagated in the wild in Hawke's Bay.

Kakabeak comeback

The Forest Lifeforce Restoration Trust has developed a ground-breaking technique to propagate kakabeak in the wild – blasting their seed into the soil from a shotgun! It hopes this innovation will allow the future dispersal of seed from helicopters, creating the potential for an aerial propagation effort on a scale that hasn't yet been possible.

Staff member Barry Crene developed the technique using reloaded shotgun shells packed with regular shotgun pellets, a pulp medium, and kakabeak seed. The shells are discharged into soil from a range of 20m, about the distance a helicopter might have to hover from likely nursery sites in the wild.

Such sites are frequently patches of topsoil on bluffs or cliff faces that are as inaccessible to humans as they are to browsers. Helicopters are often the only way to reach them.

Before settling on the shotgun technique, the trust reviewed a range of discharge mechanisms, including paintball guns. But shotguns proved best able to provide the directional force, accuracy, and penetration necessary for the seeds to propagate successfully.

Increasing the wild-grown population of the extremely rare kakabeak (*Climacium acuminatum*) is one of the trust's main projects in the Maungataniwha native forest.

It is collecting seed and propagating plants in two protected areas near Waiau Camp (designed to prevent access by browsing rabbits, hares, and ungulates such as deer, pigs, and goats) and at other sites around Hawke's Bay.

Planting of the first kakabeak returned to Maungataniwha took place during the winter of 2010, and genetic research by Landcare scientist Gary Houlston has provided clear guidelines for future plantings of kakabeak sourced from wild plants within Hawke's Bay.