Prevent the spread

Northland Wilding Conifer Control Programme

Planted in the right place conifers provide timber, store carbon, decrease erosion and provide shelter for stock and horticulture.

However, in the wrong place some conifers are becoming a major threat to New Zealand's ecosystems and whenua where they compete with our native plants, reducing food sources, water and habitats for wildlife.

What are wilding conifers and wilding pines?

'Wilding conifer' is the New Zealand term for introduced conifers which include pines that have self-seeded and are unwanted.

Why are wildings a problem?

- Wildings are invasive. At the current rate of spread science advice tells us 25% of New Zealand will be invaded by wilding conifers within 30 years.
- They compete for space with native trees without providing a food source for native birds or insects.
- The needles discourage regeneration of native forest floor species.
- The timber has little or no value.

In Northland wilding pines are rapidly becoming a major problem outside of plantation forests and some of our most unique habitats are now vulnerable to invasion. Seeds can be blown many kilometres by wind and have spread into some of our most unique and fragile ecosystems areas such as coastal margins, dunes, wetlands, gum lands and geothermal sites.

Wildings are also a prominent weed species in regenerating bush and on roadsides and waste land. Seedlings quickly infest an area. If not removed, these wildings create a dense canopy where little will grow except other pines and weeds and soon the natural landscape is severely altered.

Working together to control the spread of wilding conifers

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Which conifers are the problem in Northland?

While there are 10 main species of conifers that have become wildings in New Zealand, in Northland the most commonly found wilding is **radiata (*Pinus radiata*)** and to a lesser extent **Maritime pine (*Pinus pinaster*)**. Radiata was first introduced into New Zealand in 1859 and today 89% of the country's plantation forests are of this species.

In Northland, radiata is now a commonly found weed on roadsides, disturbed sites, urban bushland and waste areas.

There are not many places radiata won't grow and with Northland's mild climate the trees are able to grow all year round. Wildings are beginning to self-seed and spread at an ever-increasing rate.

Planted in the 1980s as part of a dune stabilisation strategy mainly at Hokianga, Poutō, and Aupōuri, wildings have escaped the forests and changed the fragile dune ecosystem. Pines also remove a great amount of ground water. Depending on the size of the tree this could be as much as 600 litres a day per tree.

How can we stop the spread?

With a strategic approach we can target priority sites and work to prevent further spread of wildings, containing trees within plantations where they have a place as part of the forestry industry – a major source of Northland's economy.

Eradicate the source → Remove the wildings → Prevent re-establishment

Eradicate the seed source

Plantation forests often get the blame for the spread of wildings, however they are not the only culprits – old legacy pines planted by our forebears for shade, erosion control and shelter are also a major seed source. If possible, they should be removed.

Cones can roll down a hillside into waterways, dispersing seeds along the way. Each cone carries around 160 seeds and a large legacy pine can produce thousands of cones each season. Roadsides and unused land act as corridors for many weed species including wildings of all sizes.

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Pollen from male cones can travel several kilometres on the wind.

Pines start producing female cones on average at 20 years old, however a tree can produce viable seed as early as five years old.

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It is predicted the cost of controlling the spread of wildings nationally increases by 30 percent each year they are left unmanaged, creating a $4.6 billion threat to the economy by 2050.

Remove the wildings

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Thought and careful consideration needs to take place when deciding the best option for removal. The site and situation will dictate the methods used.

The best option is to pull them out when they are seedlings – it is easier and cheaper. The land can then return to its original use much faster. Whenever you see a pine seeding in the wrong place, pull it out.

For felling trees:

a. Fell to waste and allow the tree to break down naturally over time.
b. Fell and recover the timber for sale as logs or for winter firewood. If this can be done with minimal damage to the environment it may be a viable option.

Large, older trees like the ones on the left may need trained arborists to remove limbs one by one to limit damage to surrounding bush and to ensure animals, people and vehicles are not at risk of dead branches falling in the future. This is a very costly option - up to $3000 for a large tree.

The third option is herbicide use:

a. Drill and fill (large trees) see photo on the right – this allows the tree to die and break down over time and lets natives grow instead. This is not always a safe option if there are houses, fences, stock, roads or walking tracks close by.
b. Basal spraying where the trunk is sprayed low to the ground – effectively chemically ringbarking the tree.
c. Helicopter spraying. This method is used mainly in the South Island on infestations covering large areas or where wildings are on steep and inaccessible terrain.

Prevent re-establishment

Once the wildings have been removed it is important to prevent re-establishment of pines and other invasive weeds.

- Have a planting plan – plant natives in the areas that wilding pines have been removed from.
- Have a weed prevention plan – contact your local weed action group for help to identify weeds and create a weed management plan which includes wilding pine control.
- Regularly survey the area and remove any new wildings. If the site was heavily infested (old pine plantations) this should be done annually for at least five years.

Controlling the spread of wilding conifers is important if we're to protect our ecosystems, iconic landscapes and farmland. Control will also help clean up our waterways and conserve water resources.

Funding for wilding conifer control

About $11-15 million is spent each year on wilding conifer control nationwide. In May 2016, the government pledged an extra $16 million over four years for the first phase of a national control programme. The new funding was used to tackle wilding conifers in the highest priority areas.

In May 2020 the Government announced a further $100 million of funding would be allocated to fund regional wilding conifer control work.

For the first time Northland Regional Council has received a portion of funding to carry out wilding conifer control throughout Northland. This initiative, through the Ministry of Primary Industries (MPI), is aimed at keeping wildings away from high value sites such as our coastal dune systems, wetlands, fragile ecosystems, geothermal areas, gum lands, roadsides, waterways and regenerating native bush.

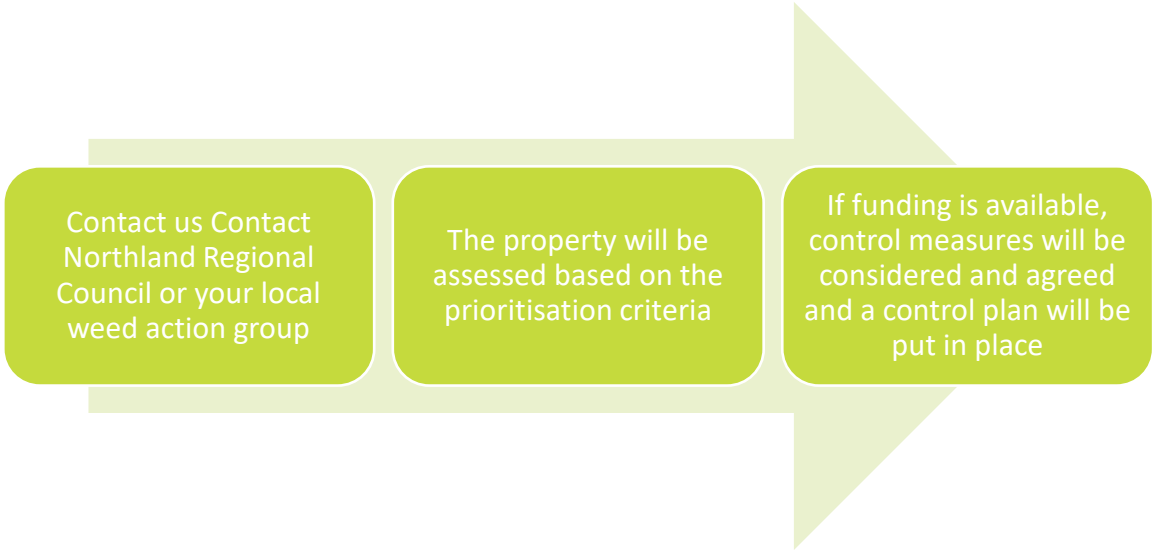
Prioritising control sites

Regional prioritisation will take into account the criteria below. Priority will be given to those sites where investment will result in the greatest return in terms of protecting cultural sites, sites of outstanding and unique landscapes, and avoiding future control costs.

Impacts	Considers the environmental, cultural, social and economic impacts
Level of existing support	Current and future weed management strategies, regeneration, and community and land owner support
Probability of success	Distribution, density, age, spread and species of wilding conifers
Potential distribution	Vulnerability of surrounding landscape that could be invaded such as native bush dune lands and farmland
Outstanding and unique landscapes	Considers fragile ecosystems, existing biodiversity and significant cultural sites

How to take part in the wilding conifer programme

If you're aware of wilding pines in a vulnerable habitat (dunes, wetlands, gum lands), here's what you can do.



More information

The following links provide some straightforward information on wilding pines.

- www.doc.govt.nz/nature/pests-and-threats/weeds/common-weeds/wilding-conifers
- www.nzgeo.com/stories/wilding-pines
- www.mackenziewildingtrust.org/files/_new_zealand_wilding_conifer_management_strategy_2.pdf
- www.wildingconifers.org.nz

There are also some good short videos on wilding pines.

- The threat of wilding pines www.youtube.com/watch?v=tOu43bGPXhg
- The impact of wilding pines www.youtube.com/watch?v=p7JU_OykYhk
- Where are the wilding pines www.youtube.com/watch?v=7hGP4aRBWmw
- Preventing wilding pines - www.youtube.com/watch?v=J8-N6LCg3eI
- Removing wilding pines - www.youtube.com/watch?v=pfsABlq8WtY

Contact us

Ceres Sharp
Email: ceres@nrc.govt.nz
Phone: 027 276 5265