

Conservation at Totara Park and Auckland Botanic Gardens

Friends of Totara Park



Totara Park is south of Auckland city centre, and covers an area of around 530 acres, which was cleared for farming sheep in 1925. In the photo above it is the area marked out by the red line. Auckland Botanic Gardens, which is 156 acres, is in the bottom left, between the park, motorway and houses, and includes the 25 acres of native forest in the north-eastern corner of the gardens.

The Friends of Totara Park have been going for 41 years, and are one of around 1000 volunteer groups in New Zealand involved in re-generating native bush, or 're-veg' as it is commonly known. Around 75% of native bush/forest and 90% of native wetlands have been lost due to human activity such as farming, fire and urbanisation. 80% of New Zealand's plants are endemic and a third of those are now threatened in the wild. The Friends group collect seed from native plants already in the park, propagate them, grow them on and then plant them out. The aim is to re-generate bush along streams, in the first instance, to improve the quality of the water. The quality of water in the Puhinui stream has improved so much that it won an award for most improved stream in the country. Usually the planting is done in autumn, over two to three months. Manuka, *Leptospermum scoparium*, and kanuka, *Kunzea ericoides* seedlings are planted as hardy pioneer species to improve the soil structure and re-establish mycorrhizal activity before planting native plants that have been grown on for a year or two to produce strong young plants about 1m tall or more. Native trees planted would be totara *Podocarpus totara*, kauri *Agathis australis*, nikau *Rhopalostylis sapida*, puriri *Vitex lucens*, rimu *Dacrydium cupressinum* and rewarewa *Knightia excelsa* amongst others. They have quite a lot to do, and are in need of more volunteers, as the number of members has gradually declined over the years to around 7.



At Auckland Botanic Gardens nursery, around 60,000 plants are grown a year, half of which will help re-vegetation projects in around 26 of Auckland's regional parks. The head rangers of each park collect seed from native shrubs and trees, from different specimens each year to encourage a diverse gene pool. These seeds are sent to Auckland Botanic Gardens in February where they are propagated and seedlings are sent back to the parks they came from four or five months later to be planted out. The nursery also keeps ex-situ collections of threatened island species which are propagated from, and if the last remaining species are wiped out on Islands such as Great Barrier Island, then plants can be sent back once all the soil has been cleaned off to prevent the spread of weeds and diseases.



The Native Plant collection is one of Auckland Botanic Garden's largest collections and contains plants found in the northern part of the North Island, which are therefore adapted to a warmer, more humid climate. Alpines from the mountains of the South Island, are not grown as they would not cope well with Auckland's humid summers. There is a threatened native plant section which recreates various environments found in the North, such as coastal and wetland habitats, highlighting endangered species found in those areas with information boards. The public can also go on a Native Plant ID trail, showcasing native trees and shrubs with useful

information boards on their cultural and environmental importance, and how they have become threatened.



Visitors can also get inspiration for their own gardens in the Native Plant ideas section, which should encourage people to use more native plants in their own gardens.



Auckland Botanic Gardens are also involved in the conservation of *Araucaria* and *Agathis* species (amongst others), endemic and threatened in their native habitats of New Caledonia, Vanuatu, Solomon Islands, Fiji, Chile and Argentina. As these trees in the wild disappear through habitat loss and harvesting, Auckland's ex-situ collection in their Gondwana Arboretum are important specimens for preserving these ancient species of tree. New Zealand's endemic kauri, *Agathis australis*, is now mainly restricted to the Waipoua and Tronsoun forests of the North Island, and the 2000 year old trees are threatened by kauri dieback disease (caused by *Phytophthora agathidicida*). This is being tackled by providing disinfecting stations for visitors to clean their shoes with before walking onto the broadwalks built to keep people off the soil. At Auckland Botanic Gardens, on a guided walk, the benefits were discussed of trying to increase the gene pool by cross pollinating as varied a selection of trees as possible to find resistant ones.