



Lakes380

Our lakes' health past, present, future
Me hoki whakamuri,
kia haere whakamua



LAKE WAIKARE

Region: Taranaki **Location:** Waverley **Coordinates:** 39° 40' 8" S, 174° 48' 21" E **Depth:** 18.2 m

Lake Waikare is a small lake in south Taranaki. It is surrounded on most sides by a pine plantation except on the western margin where there is an area of native bush. The lake and surrounding area is identified as a Significant Natural Area.

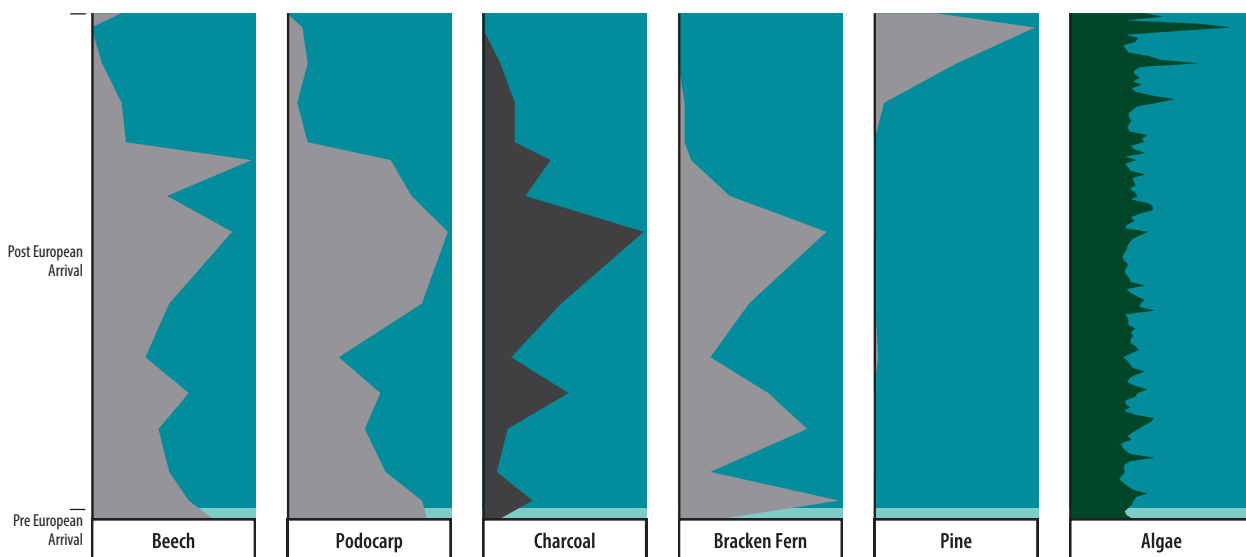
The geology surrounding Lake Waikare results in high sediment erosion which washes into the lake. Because of this the 1.4 m long core only represents about 200 years of time.

Initial results from the sediment core suggest prior to European arrival beech and podocarp (especially rimu) forests were abundant in the region. After European arrival vegetation clearance began. This is highlighted in the graphic below by the increase in charcoal (burning) and pollen from bracken fern, which is commonly associated with landscape

disturbance. Inspection of aerial photos show that clearing of the native vegetation increased in about 1960 and pine were trees planted.

Algae concentrations in the lake are highly variable. This is likely due to sediment inputs from storms which temporarily suppress the algae. Longer term, sediment adds nutrients to lakes. There has been a slight increase in algae in the lake particularly in recent years, which may be related to the felling of the pine plantations in 2017.

POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~200 YEARS



The shaded area indicates the concentration of plants, charcoal or algae through time.