



**Lakes380**

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



# SPECTACLE LAKE



**Region:** Auckland **Location:** Te Arai **Coordinates:** 36° 10' 49" S 174° 37' 52" E **Depth:** 5 m

Spectacle Lake formed about 12,000 years ago by coastal sand dunes preventing inland water from running out to sea. No rivers or streams flow into this lake. The water comes from rainfall as well as water seeping up through the sand.

Initial results from the sediment core suggest that prior to human settlement, Lake Spectacle was surrounded by native forest abundant in beech, podocarp, kauri and sedges. Changes in the vegetation during this period suggest the lake became a more swampy system surrounded by forest increasingly dominated by kauri.

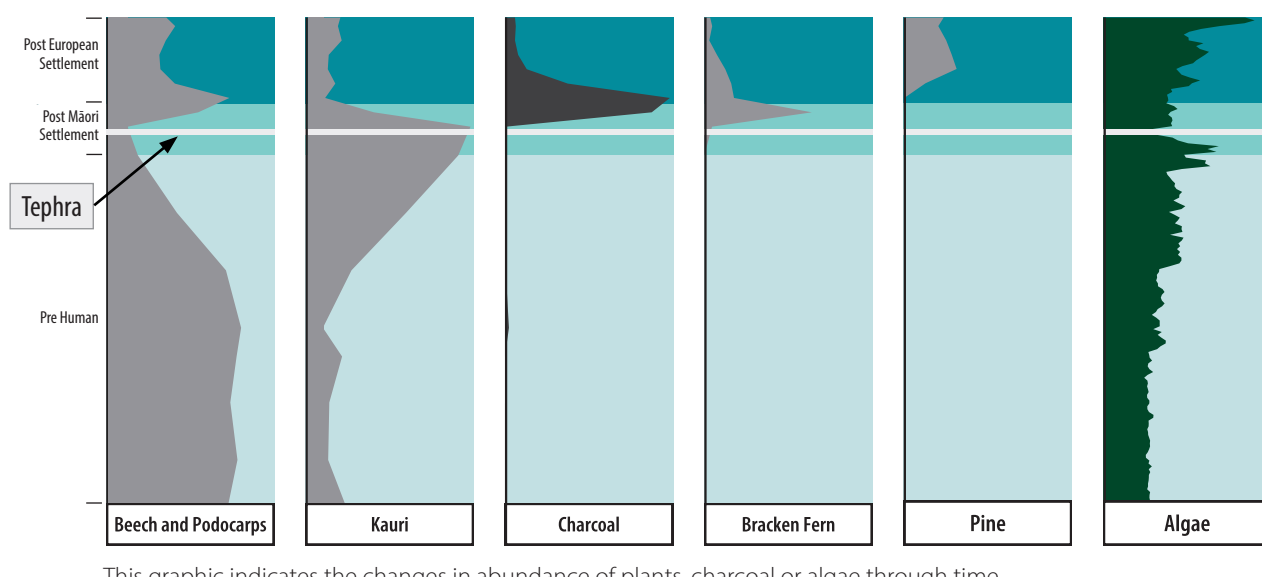
The white band visible in the core is a "tephra" or layer of volcanic ash deposited from the Kaharoa eruption (Mt Tarawera) about 700 years ago.

Post Māori settlement, some vegetation disturbance occurred. This is highlighted in the graphic below by charcoal (fire) and increased bracken fern, often associated with landscape clearance. Kauri tree abundance decreased.

Post European arrival, removal of kauri and tall trees increased. Farmland and pine plantation were established in the region.

Algae have always been present in the lake, but have increased in abundance in the last approximately 50 years.

## POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~2,000 YEARS



This graphic indicates the changes in abundance of plants, charcoal or algae through time.