



Lakes380

Our lakes' health
past, present, future

Me hoki whakamuri,
kia haere whakamua



LAKE KILLARNEY

Depth: 12 m **Location:** Takaka Township **Region:** Tasman **Coordinates:** 40°51'07 S 175°48'29 E

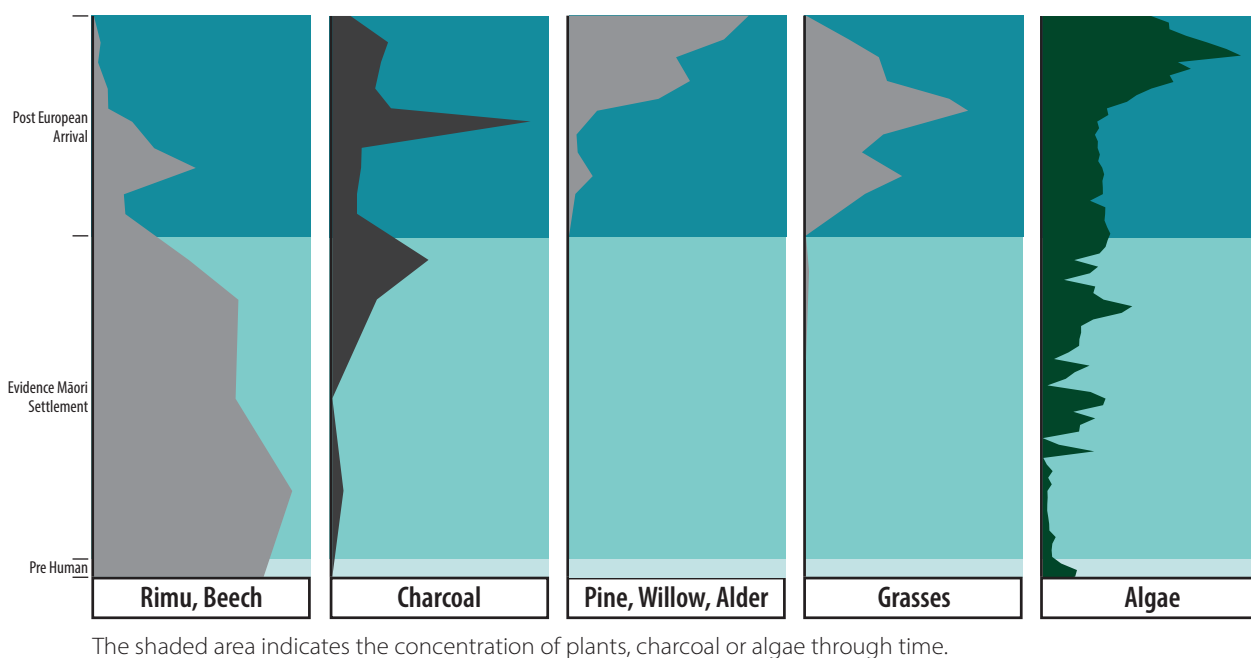
Lake Killarney is a small lake surrounded by park and residential houses. Residents remember swimming in this lake in the 1970's. It now experiences severe algal blooms and has poor water quality.

The initial results from the sediment core show that prior to human arrival the margins of the lake were dominated by rimu and beech forest (see graphic below). After human arrival some vegetation clearance began in the region. This is highlighted in the graphic below by the increase in charcoal (burning) at times during this period. The light brown/cream colour bands in the core (pictured left) between

55 - 70 cm are likely caused by mud and soil washed into the lake from the surrounding land.

Post European arrival the native vegetation was replaced by pastoral land and non-native trees such as pine, willow and alder. There is a notable increase in total algae in the Post European arrival era. DNA analysis shows this is dominated by potentially toxic algae (cyanobacteria).

POLLEN, CHARCOAL AND ALGAE LEVELS FOR THE PAST ~800 YEARS



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