**A golf course pond is usually only responsible for lost balls, but Taupō’s Wairakei Golf and Sanctuary uses one of its water hazards for heating a new clubhouse.**

Wairakei Golf and Sanctuary is recognised internationally for its distinctive blending of recreation with restoration and conservation.

The course is surrounded by a recently completed 2 m tall fence, five kilometres in length, specially designed to keep out predators like rats, mice, stoats, weasels, hedgehogs, feral cats and possums.

Plant and animal pest eradication programmes and the re-planting of around 25,000 native trees and five thousand exotics create an environment where native species are beginning flourish.

Nigel Lloyd, Wairakei Golf and Sanctuary Manager, says: “In 2012 we partnered with the Department of Conservation in the Kiwi for Kiwis breeding programme. Our sanctuary is a crèche for newly hatched kiwis. They come to us at 2 weeks old and after 9-12 months, when they can defend themselves from predators, they are released back into their original nest areas.

There are Kiwi within the Sanctuary at all times that freely walk about, giving people the opportunity to see a real live Kiwi.”
New Zealand requires reliable, renewable energy sources into the future. The Government is supporting GNS Science in fostering increased use of renewable resources. By 2025, the Government’s Energy Strategy aims for direct use of geothermal energy to account for more than 12 PJ/year.

For more information visit our website: www.gns.cri.nz/earthenergy or contact us:

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“When it was time to build a new clubhouse it was a natural extension to the conservation theme to find an energy efficient, environmentally friendly heating solution.”

Nigel says that an existing man-made lake, built to provide a water hazard for the golf course, provided the solution. The temperature of the water in the lake remains relatively constant year round and this low grade heat is collected by a geothermal heat pump in a closed loop, submerged coil configuration.

A pipe was laid in a trench leading from the clubhouse to the lake, approximately 200 metres away, where it is anchored to the bottom with weights and arranged in a circuit to access as much of the lake as possible. The circuit completes by the return pipe running in an adjacent trench back to the clubhouse.

“The heating solution we ended up with makes use of what we already have on site. It’s clean, quiet, and cost effective to run, and ties in well with our conservation ethic.”

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