

# The Greenlink Cave System Story

By Michael Brewer

December 2022: – The Nelson Speleology Club, in conjunction with the New Zealand Speleological Society (NZSS) has, for the first time in New Zealand caving history, privately raised over \$180,000 to purchase land on top of Tākaka hill to guarantee caving access to the under lying Greenlink Cave System and to preserve the land above.

Money was raised by seeking donations from society members and affiliated groups.

ACKMA gave generously to this cause and this article is in part an acknowledgement of this.

## Why Greenlink?

The Greenlink cave system is of national significance. It is New Zealand's second longest cave. It is over 40 km in length and has a vertical range of 400 m. It lies only 90 minutes' drive west from Nelson and is situated within the marble massif that makes up most of Tākaka Hill.

It drains most of the water that falls onto the southern end of Tākaka Hill, with the water resurging at the base of the hill from the Riuwaka Resurgence Cave. Presently there is no humanly traversable connection between the Greenlink cave system and the Riuwaka Resurgence Cave.

Overzealous use of fluorescein dye after its discovery proved there was a water connection, by turning the Riuwaka River vibrant green – hence the name “Greenlink”.



The potential for connecting these two caves has spurred on exploration over the decades since the cave was discovered in 1974. Such a connection would allow a through trip in a system over 50 km in length with a vertical range of 700 m. Additional caves that have also been dye traced to the Riuwaka Resurgence Cave, if connected, would make a system of over 70 km in length.

The cave system consists mostly of active stream passage with adjacent older, dry, parallel passages that are prone to flooding.

There are multiple large chambers in the lower levels formed by roof collapses. Large upper-level dry passages exist in places, representing remnants of an older system, a lot of which has been eroded away.

There are several highly decorated grottos, multiple complex rockfalls and sumps. Large banks of silt and plant debris throughout the lower levels are felt to be due to the erosion that followed extensive land clearance in the catchment starting in the early 1900s.

Exploration is ongoing. Prior to 2010 the system had a total length of around 8 km. A breakthrough in 2010 led to the bypassing of a rockfall that had stopped explorers since 1983. By 2014 the known cave had expanded massively and totalled 30 km in length. The 40 km mark was reached in 2022. Two permanent campsites have been established. The first one, Camp Levall, is about 4 hours into the cave and the second one, Camp DJ, is another 3 hours further in.

Camping has been made fraught with the knowledge that river levels can rise 30 m following heavy rain. Multiple potential campsites exist on lovely sandy floors close to streams, but it is hard to sleep easily with the thought that water could start lapping your feet if rain were to occur!

Presently exploration is focused on finding a lower entrance to the system, with surveying indicating we are only meters from breaking through to the surface. This would create a superb through trip and enable rapid access to the lower levels of the system, facilitating exploration considerably.

### **The Purchase**

Tākaka Hill has large tracts of private land which has proved to be generally marginal for farming and is more and more the domain for people who enjoy the isolation and challenge of living off grid in a rugged environment. Some cattle and sheep are still being run on well-established farms, but a lot of the land is regenerating bush.

There are also areas of commercial forestry which, when logged have caused run off and significant sediment accumulation in cave entrances and passages.

Unlike a lot of caves in the South Island of New Zealand, which are on conservation land, access to the caves on Tākaka hill is controlled by landowners and the ongoing health of the cave systems depends on what the landowners decide to do with the land above.

By purchasing the land, we will have bought two of the six known entrances to the cave system and guaranteed the protection of the regenerating forest on this land. This area of land has already been identified as having high conservation value. We hope that this will lead to further purchases allowing for greater protection of Greenlink and other vulnerable cave systems in New Zealand.

It is the first step towards ensuring the long-term health of what is a truly remarkable cave system.

### **Cave Conservation and Access Trust**

NZSS has established a trust to purchase and manage land for the purposes of conservation and access to karst and cave environments. More information is available at <https://www.caecat.nz/>

