

Glenn Davis for QLDC – Hearing Stream 14 - Ecology

1. I have prepared ecological evidence on behalf of the Council to set out the ecological values remaining within the Wakatipu Basin Rural Amenity Zone and consider restoration opportunities. I have also provided specific evidence on the Friends of Lake Hayes submission.
2. The remaining systems with indigenous flora and fauna components located within the Wakatipu Basin are associated with the remnants of shrubland, wetlands, and watercourse habitats, along with surviving populations of native bird, fish, invertebrate, aquatic macroinvertebrate, and lizard species. The remaining native vegetation within the Basin is highly degraded, isolated, and generally small in scale, however, it is utilised by the remaining faunal values within the Basin.
3. Remnant shrubland patches lack the diversity of the original communities, however they continue to provide ecological value as they provide habitat for indigenous invertebrates, lizards and birds and are valuable in supporting potential future restoration projects. Wetlands and riparian habitat is now largely dominated by introduced species such as soft rush (*Juncus effusus*), willows (*Salix* species), and swards of introduced grasses. However, indigenous species such as *Carex secta* do persist and ecological values remain as they provide habitat for threatened fish and bird species, flood mitigation and act as sediment and nutrient sinks.
4. Freshwater bodies in the Basin have all been modified, however they remain an important habitat for aquatic plant species such as the native milfoils and charophyte species found in Lake Hayes, fish and aquatic macroinvertebrates and threatened species including the 'Nationally Endangered' Central Otago roundhead galaxiid (*Galaxias anomalus*) that has been recorded in the upper reaches of Mill Creek.
5. While the terrestrial and freshwater ecological values of the Basin have been in a general decline for a long period, ecological restoration implemented as part of subdivision consents and undertaken by volunteer groups including the Wakatipu Reforestation Trust, Wakatipu Wildlife Trust and Friends of Lake Hayes is providing support for the remaining indigenous species within the Basin.
6. The submission by Friends of Lake Hayes focusses on the risks of landuse change and development activities on the water quality of Lake Hayes, and seeks restrictions on development and stronger controls to minimise the loss of contaminants to Lake Hayes. The water quality of Lake Hayes is very sensitive to additional contaminant loadings. Should rezoning of land within the catchment be adopted, it is my view that development and design controls (that are designed to promote the improvement of water quality in the Lake Hayes catchment) should also be incorporated into the plan.