

## Mitigation measures: using invertebrates to evaluate restoration success in two New Zealand habitats

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Restoration ecologists and practitioners use many methods to assess the trajectory of ecological restoration programmes, but in many cases invertebrates are not included. Invertebrates' dominant diversity, many roles in ecosystem services, short generation time and sensitivity to changes, make them the ideal candidates for assessing the effectiveness of restoration efforts. Restoration by Winstone Aggregates Hunua, Auckland to mitigate gravel extraction and by Rio Tinto near Punakaiki, West Coast have used a range of invertebrate monitoring methods to assess their restoration success. At both locations replicated plots of mature forest, restoration plantings and unplanted grassland controls were surveyed. Leaf litter invertebrates, wooden discs, light traps, earthworms, weta motels and pitfall traps were used to determine which species are useful indicators of restoration success. At both locations dung beetles, weta, mites, earthworms and moths had significant differences between treatments suggesting these taxa are potential indicators of successful restoration trajectory.