

Wildlands Wellington News August 2016

An update on our people and services.

Tihei Matariki – Happy New Year

Wildlands: providing outstanding ecological services to sustain and improve our environments.

Recent projects

Wellington Wildlands staff have been out and about a fair bit lately, in streams and forests, and on the sea. The most unusual site visited was a saline spring, 3.5 km inland and 380 m up a hill in the eastern Wairarapa. This is one of a network of springs extending northwards to Hicks Bay. Springs of this type are globally rare. Saline fluids, more salty than the sea, rise from deep in the earth and provide information for GNS scientists about the subduction zone 10 km below. Saltmarsh plants occur at the site, in superfine mud.

We have also observed some interesting animal behaviour. Many of you will be familiar with the sight of kekeno (fur seal, *Arctocephalus forsteri*) hauled out at various places along the coast. But did you know that they also haul themselves onto moored buoys?

The site of a project in Ōtaki has remnant forest including large tōtara trees. These remnants will soon be free of pest plants and animals, with a wide buffer of young trees around them. Outside the buffer a lake will be created with wetland plants and beaches. This is a novel approach for the design of a gravel quarry.



Stream culverts

Wildlands has been working with clients to reduce the effects of culverts on instream habitats. The image below left shows perched culverts without baffles that prevent fish migration in two ways: a drop-off that fish cannot swim up, and high velocity flows without resting places within the culvert. By increasing the size of a culvert it can be laid below the natural bed of the stream, retaining many natural stream characteristics.



However, the stream in the yellow culvert on the previous page was not an overnight success. For the first few weeks the stream flowed under the gravel in a manner that disconcerted the compliance officer and impeded fish passage (see the image on the right). It took a few rainfall events before enough fine sediment washed down from upstream to fill in some of the gaps between the stones, lifting the water back to where we, and the fish, wanted it to be.



Understanding fluvial processes as well as biotic ones is important when dealing with fish passage through culverts. This is also true when reassuring engineers that the whole streambed won't wash clean out of the pipe during high flows.

Collaboration

Wildlands Wellington can extend their capability by partnering with staff from other Wildlands offices to create multi-disciplinary teams. Specialties that we have in-house or that we can call on include: botany, ecology, uncommon habitats, biogeography, birds, bats, lizards and frogs, freshwater fish, butterflies, moths and other terrestrial invertebrates, aquatic invertebrates, invasive species, translocation, surveys, monitoring and statistical analysis, weed control, pest animal control, monitoring, and ecological restoration.

We also partner with professionals from other disciplines including landscape architecture, planning, engineering, hydrology, and heritage. This means we can put together a customised team to tackle projects of any size or complexity from the assessment of one tree to multiple ecosystems. We do it all.

In addition, we have strong links with academics and researchers at universities, Crown Research Institutes, and other institutions. This helps us stay at the cutting edge of research in applied ecology and allows us to feedback experience gained in the field.

Many projects involve collaboration with community and iwi groups. Wildlands Wellington has considerable experience with community consultation and takes pride in helping these groups at a professional level, and in our own time, to achieve the best possible outcomes. We can also manage joint projects.

Examples of recent collaborative projects Wildlands Wellington has participated in include: nationwide farm fish surveys, assessment of significant natural areas for District Plans, and black-billed gull population trends for scientific publication and an assessment of effects on king shags.

Projects recently completed by Wildlands Wellington include: Christchurch District Plan airport bird strike provisions, Kaiwharawhara Stream barriers to fish passage, assessment of proposed mountainbike areas, consented man-made lake with forested islands, and vegetation assessment for international certification.

Wellington People:



Astrid van Meeuwen Dijkgraaf, PhD Ecology, Senior Ecologist

A highly qualified ecologist with a wealth of experience on large projects such as subdivision and infrastructure consent applications; and monitoring and inventory. Strong leadership skills make Astrid the ideal person to oversee projects while her science background means she can identify and initiate appropriate investigations and solutions for your projects.

Specialist skills: Survey and monitoring and expert witness at Hearings (birds, bats, lizards, ecology, biodiversity offsets), design of monitoring programmes and data analysis, plant-animal interactions and management.



Frances Forsyth, BSc Geomorphology and PG Dip Ecology, Senior Ecologist

An environmental scientist and ecologist with experience on a wide variety of projects particularly those involving freshwater fish. Frances has a reputation for well-researched, thoughtful and practical work with well-written clear reports.

Specialist skills: Ecological restoration, ecological management plans, expert witness at Hearings, freshwater fish, and stream management. SEV and electric-fishing qualified.



Rachel McClellan, PhD Zoology, Senior Ecologist

An experienced ecologist and expert ornithologist who has worked on a wide variety of projects including strategic and conservation plans for large-scale restoration programmes, environmental impact assessments for mines, hydroelectric proposals, subdivisions, and wind farms, and the evaluation of threatened bird management programmes.

Specialist skills: Design, implementation and review of fauna monitoring programmes, expert witness at Hearings (seabirds, shorebirds, forest birds, wetland birds), expert ornithological advice, writing and review of environmental impact assessments.

OFFICE LOCATIONS

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