



**NATURAL HABITATS**  
LANDSCAPES

**Thought Piece**  
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## **Water water everywhere ..... but what are we doing about it?**

**By Lloyd Atherfold, Natural Habitats**

First, an admission.

I'm a big fan of council regulation that supports environmental protection and which helps people through what might seem like an approval minefield.

And of councils who see water as an asset, not a waste product to be dispersed as fast as possible, and who help educate and support people in this way.

There's very good reason why this is incredibly important.

In the past 150 years New Zealand has lost 85% of its wetlands to "reclamation". With it has gone an array of habitats and much of the earth's ability to absorb water, leading to lower quality water (less natural filtering) and flooding.

The attitude of European settlers to wetlands is underlined by the unflattering names used to describe them, including "bogs" and "swamps".

Widely seen as an obstacle to progress, land that withheld water was progressively developed.

In many instances this was driven by necessity, as much as by a view that "wetland" equated to "wasteland".

Rapidly growing human populations meant lowlands that were once finely tuned to supporting life, filtering water and maintaining ecosystems were replaced with buildings and hard surfaces.

These had the reverse effect to that of their natural state. Rather than acting as a pathway along which water fulfilled its natural role, the land was given an impermeable cloak that shed water in vast quantities, as fast as it could.

As a result, we've come to regard water as much as a waste product as a giver of life. Hence terms like 'waste' or 'storm' water that carry toxins from our backyards, pavements and roads into oceans.

In the process, the natural filtering role of the soil is being significantly undermined.

Water is designed to soak into the ground - and the ground is designed to welcome water.

In the natural world, most of the water in catchments, lakes, streams and rivers made its way there via the soil rather than by skimming across the top.

But as our towns and cities have expanded, so too has the hard paving - and the amount of 'skimming' water.

Each time a new site is developed for housing, around half of its absorptive capacity is lost.

Generally speaking, Most councils allow 30 - 35% of a property's total area to be covered by the dwelling, and a further 15 - 25% by hard surfaces.

This means that, in a blink, 50% of the natural permeability of that land disappears, more or less permanently.

The issue is all the greater when you consider the classic conventional method to preparing sites.

The first step is to scrape land clear to ready it for sale. Natural features are generally the primary target as all vegetation is removed, without necessarily considering the effect of the clearance on existing eco systems.

In the haste to remove topsoil, clay is also scraped off and ends up being mixed with the topsoil which results in poorly draining soil on clay base.

In other words, even the "permeable half" of many new sections is barely able to perform its natural function.

So, we end up with a double whammy. Half the land is taken for development, while the other half is fundamentally deconstructed.

If you want to know why this matters, you might be interested in visiting the Villages Homes website ([www.villagehomesdavis.org](http://www.villagehomesdavis.org)). Village Homes, in Davis California demonstrates how a development can be made not only around, but can significantly benefit from, the natural ecosystem.

The 30 hectare "village" has a network of creeks, swales and a pond, which maximises rainwater absorption. Paved areas, including road widths, are at a minimum to minimise rainwater run-off and it is a classic case study of what is possible - if we want to make it possible.

There is also some good news closer to home. Increasingly, people are asking us, often without prompting, what they can do to increase site permeability, harvest rainwater and even construct wetlands.

Raising the issue of land permeability and protection of natural water features is not about being anti development or seeking to turn back the clock.

It simply demands that each of us, and those who set the rules by which we build and develop our properties, look at land use differently.

We need to resist the impulse to automatically change it, rearranging its structure and 'conquer' it by covering it with hard surfaces.

There is generally good reason that natural sites are the way that they are.

Natural water catchments, water courses and vegetation all serve a vital purpose and it is increasingly important that we all respect this, and build around - and with - the natural order.

It's not difficult, it simply requires a fresh way of thinking.

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