



# Practising permaculture

***Permaculture is all about sustainable farming on your land with no hard and fast rules.***  
By Vivienne Haldane

There's a framed certificate on the wall of the tin shed that Jo and Aaron Duff call home. It says "Hawke's Bay Gardener of the Year" and was awarded to Jo in recognition of her work teaching permaculture and other gardening courses as well as running community working bees.

Jo is helping to spread the word about permaculture and it's a task she embraces with an enthusiastic zeal.

At the Environment Centre Hawke's Bay where she works part-time, permaculture classes fill up quickly and Jo is happy that another permaculture group has just been set up in Central Hawke's Bay. It's proof that people are latching on to this ethic which encourages us to live more harmoniously and less wastefully with our environment.

The word permaculture was created in the 1970s by David Holmgren and Bill Mollison. It's probably easier to understand what permaculture is by looking at what it's not.

Many people think "hippy" and "living off the land" or "organic gardening" when the word permaculture is mentioned.



Jo says "There are as many definitions of permaculture as there are permaculturists. It's working out sustainable ways to farm; growing your own food, developing a sense of community and local economy so they are strong and resilient to outside pressures. It's also a design science that teaches principles you can apply in different situations but as each situation is different there are no hard-and-fast rules."

### Hard graft

If you think this all sounds like hard graft for little return, hold that thought, for there's more to it than simply scratching a living off the land. Permaculture is designed to be practised in the context of the wider community and whether you have a small backyard section or

a larger piece of land there are things you can do even on a small scale, such as growing your own vegetables, composting, swapping the produce you've grown with others in your circle.

Also, permaculture is an holistic idea that is not merely about growing things but can also be applied to renewable energy, architecture, education, ethical investment, appropriate technology to name a few.

Jo, who originally hails from England, has a long-held interest in environmental concerns and studied permaculture at Crystal Waters Eco village in Australia in 2003 and in Taranaki in 2006.

Jo and her Kiwi husband Aaron bought six hectares at Poukawa in Hawke's Bay three years ago. It seemed like the perfect blank canvas for the ideas they wanted to put into practice.

"It has a mixture of flat land and contours as well as a dam; it's close to town for work (Jo and Aaron work part-time off the property) and near Aaron's family."

Living at Poukawa for two years has given the couple the opportunity to work out their long-term plan; taking into consideration the prevailing winds, direction of the sun, wet areas and their associated run off.

Jo says, "Permaculture is about designing and putting systems in place that make things as easy as possible. Make the design of your garden, farm or house, as energy efficient in terms of fossil fuels and of yourself. Things you use regularly and that are high maintenance, need to be close to the house (salad plants and herbs, chickens & small animals) whereas have things

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you don't need as regularly further away. It's really just common sense."

Plans are in place for an energy efficient house made from straw bales and earth plaster. The house site has already been chosen for its maximum sun orientation. Rainwater will be collected from the roof and a system of "grey water" (waste water from showers and washing) will conserve every available drop and be collected for watering trees. And of course there'll be a composting toilet.

Further proof that nothing is wasted - excavated earth from the driveway has been stored to use as a shelter bank behind the new house.

### Self sufficient

Jo and Aaron are off the national electricity grid and intend to stay that way. "We currently operate on solar power, from two 160-Watt solar panels. This will be added to when the house is built and we will install a 300-Watt wind turbine."

A shelter belt of pine trees has been planted to act as a nurse crop for natives and other areas will provide firewood for the wood burner in cooler months.

"When deciding on shelter trees, the siting and the type of tree are both taken into consideration." Jo says,

"We don't want anything that's too flammable (such as gums) on the northwest - prevailing dry winds could bring fire hazard, especially with climate change. So we need to choose trees species carefully. We also want them to be multi functional (eg fixing nitrogen, providing shade, stock fodder, fruit or nuts, pollen for bees).

We'll also use Earth mounds as wind barriers and plant toi toi and flaxes on top of them for extra protection."

Plans for water management have been drawn up by an environmental engineer / permaculture designer. The clay pan will be deep- ripped in autumn to improve drainage on the property.

"We will put swales (ditches) on some of the contours then plant on the downhill side of those."

This serves the dual purpose of providing water for the plants and conserves precious water as well.

According to Jo, "Permaculture is a lot of fun and is very



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solutions based. It appeals to all sorts of people who can apply it to their own situation.

"One of the things we do is an element analysis. Everything you want on your site you do an input and output analysis for, so you ensure you have a cycle happening. Take chickens for example; their output is manure, meat and eggs. Their input is food, water, other chickens and shelter. You then put them in the right place within your system.

"If you have them in the orchard they are performing some of the functions that the orchard needs: cleaning up pests from fallen fruit, manuring the trees.

So the outputs from the chickens become

the inputs for the orchard and vice-versa."

Large blue barrels of manure, seaweed and weed tea sit at one end of the vegetable garden. These "brews" will provide the garden with valuable minerals for abundant growth.

It's been a challenging year with an autumn drought and then the bore pump blowing up, leaving them with only their tank water supply (2000 litres) which had to be very carefully eked out.

Garden beds are heavily mulched with straw or hay throughout the year to combat weeds and retain soil moisture. Compost heaps are often made on top of a bed and dug directly in when ready.

Green crops such as mustard, lupins, rye and

oats are grown as "living mulch" during the winter months and then dug in, to provide nutrition for the spring planting.

In their garden, Jo likes to mix up flowers and vegetables there's also a border with a wild mix of phacelia, buckwheat, alyssum and coriander which are beneficial for attracting predatory insects.

Jo explains, "We don't pamper our plants - we deep water them but never just tickle the tops."

Chickens and ducks are run on the property. Jo says "We feed them once, at the end of the day so they are forced to forage and then only top up from us." Being vegetarian the Duffs won't eat the birds, instead bartering them for something else they need.

Jo says, "We want to develop a community-supported agriculture scheme whereby people pay up front at the beginning of the giving the farmer a budget to work on. When the crop is harvested, the shareholder then gets their portion of the yield. This is popular in Britain, United States and Europe (known as subscription agriculture) but is quite a radical concept here."

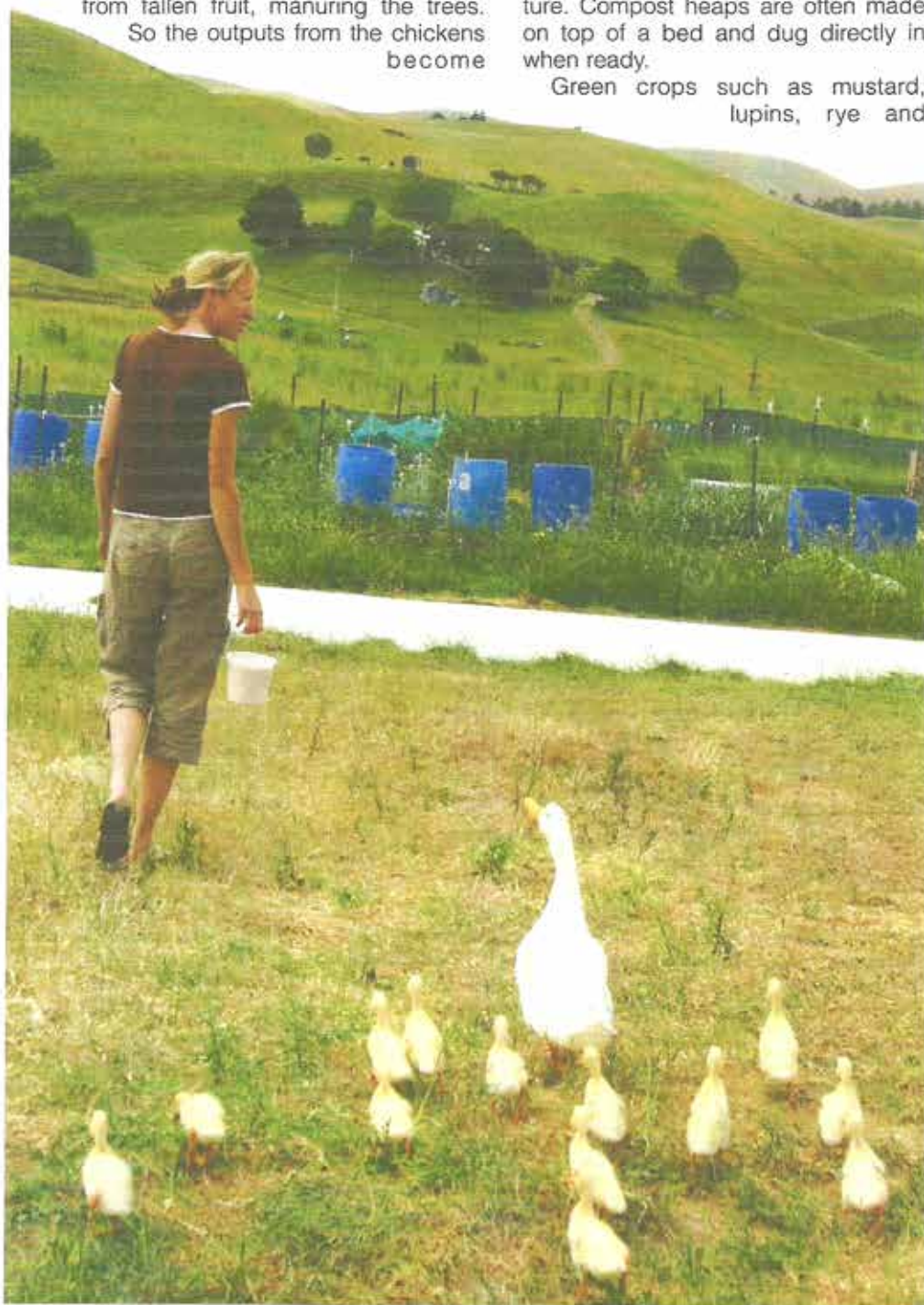
Jo and Aaron will sell what is grown on their property and barter for food they don't have. This season they've planted pumpkin and sweet corn to sell as their first cash crop at local organic shops.

Their goal is to be self sufficient but within a network of people. Jo says "I don't think there is a huge value in being self sufficient just for yourself, and ignoring other people. We all need community."

Future plans include having WOOFERS to live and work on site and the farm serving as an educational centre.

## Sustainable future

To Jo and Aaron, planning for a sustainable future is common sense. Jo quotes Rob Hopkins, a permaculture teacher in England, who says that people in the Western World are now amongst the most useless who have ever walked the planet; we don't know how to grow our own food or build houses out of natural materials. Jo says "We don't have those skills any more and it's a fact we'll run out of oil at some point. It's important to have skills for when this time comes. Why wouldn't you want to make a plan anyway? We





## Jo's start-up tips

all have insurance and pensions – this is just a similar kind of thing.”

■ Observe your garden or land, make a note of what you see and how it feels – use all your senses. Notice the changes over time and keep a diary. This will help with design planning later.

■ Look at the plants you have. How many purposes do they fulfill, eg timber, food, medicine, fodder, shelter, shade, firewood, fragrance, hedge/barrier? What other plants could you introduce that are multi functional?

■ Find out more about your soil type. Make compost, start a worm farm or build up organic matter in the soil.

■ Learn about the insects in your garden – which are pests, predators etc. Don't reach for the sprays – you may kill the good bugs, too. Ask why the pests are there. How can you create a habitat for their predators?

■ Look at the different areas/uses you have in your garden. How do they interact? How could they interact more usefully?

■ Look at the vertical spaces you have available outside. Could you use any of them more efficiently?

■ Think about how energy efficient your house is. What could you do to improve it?

■ Analyse your rubbish bin – how could you reduce waste? What can you re-use? What can you produce/make/repair at home to reduce what you bring into the home from outside?

■ Buy local as much as possible - support local employment and reduce transport costs.

■ Think about what products or services you could offer for barter/green dollars, eg swap plant cuttings with a friend.

■ Share information and ideas so all people can learn to live sustainably – co-operation not competition

■ Refer to books from the library on permaculture design

■ Join your local permaculture group and/or Transition Towns initiative (relocalisation network)

■ Attend a permaculture course to find out how best to put your ideas into practice

■ Visit these websites:

[www.permaculture.org.nz](http://www.permaculture.org.nz)

[www.permaculture.co.uk](http://www.permaculture.co.uk)

[www.shbt.org.nz](http://www.shbt.org.nz)

[www.rainbowvalleyfarm.co.nz](http://www.rainbowvalleyfarm.co.nz)

[www.koanga.co.nz](http://www.koanga.co.nz)

[www.earthtalk.co.nz](http://www.earthtalk.co.nz)

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[www.permaham.booo.co.nz](http://www.permaham.booo.co.nz)

[www.transitiontowns.org.nz](http://www.transitiontowns.org.nz)

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