

'PERMACULTURE MEETS CREATIVE DESIGN' WEEKEND with Robin Clayfield and Friends at Crystal Waters Permaculture Eco- Village (CW). 11th to 13th August 2012. A Report by Rumi.

DAY 1

We started with a circle. Everyone introduced themselves and explained very briefly what permaculture means for them. After that, Robin explained how the course has developed into what it is today: a free course for members of the Crystal Waters community and other people interested in the community and permaculture. She explained the plan for the day and some instructions for the next session; a 'Tour of CW.'

Session 1 - TOUR OF CRYSTAL WATERS ECO-VILLAGE

We started with some history of the place and Robin invited people from the community to also add information. During the tour we were able to see different private enterprises - a retreat, a bakery, a seedling nursery, a woodlot, an art studio and a non-profit co-op which supports some of these enterprises.



We visited the cemetery and the bamboo forest - also a social enterprise - and we had the opportunity to see a green sod roof, a private property which uses swales and other

permaculture features, and implemented plans in and around the village area and the community.

Session 2: **CREATIVE EXAMPLES OF PERMACULTURE PRINCIPLES**

Through a very iconic PowerPoint we were able to see the permaculture principles applied in a creative way. Many of the examples were from a social perspective:
E.g.: - Graffiti in a City farm rather than getting vandalized (social spaces)
- Using your place as an educational place
(Both of them embody the Permaculture principle: Multifunctional)

Session 3: Playing Robin's **PERMACULTURE PRINCIPLES GAME**

1. There were different colored cards. Everybody picked up 2-3 cards relating to the 12 principles. We had to match them together, interacting with others in the group, and complete the 12 permaculture principles. At the end we had 12 lines on the floor. Each line talked about one principle.



Robin checked the results with the group to ensure everyone participated in the process.



Next, we talked about the 4 permaculture ethics. Robin placed the 'ethic' cards on the floor in the middle of the 12 permaculture principles lines. She gave us a photocopy with the summary of the permaculture principles card game, and finally some 'blank' yellow paper where we had to write down examples in Crystal Waters and place them next to the ethic that the example corresponded with.





With this system of 'yellow papers' it was easy to see how much energy was already being given to each principle within the community - it was like a 'quick view' of what has been happening!

RESPONSES AND OUTCOMES OF ROBIN'S PERMACULTURE PRINCIPLES GAME:

NATURAL SUCCESSION	BIOLOGICAL RESOURCES	MULTIPLE FUNCTIONS
Accept Change Negatives as important as positives Don't stop good ideas before they begin Kids permaculture garden (develop carousel) Up dating our By-laws Be responsible Make space for critical Evaluation Conflict resolution Processing Workshop & Education (e.g. Wellness Feast)	Biodiesel production Love the horse poo Wallaby and Kangaroos as mowers in winter (can we use poo?) Support people to endure Recycle trade within your own community Share surplus Give without Financial reward, rather long term benefit for all 'Integrate' People's giftedness Op shop Compost Toilet Creating the most with the least energy SECTORS Creating opportunities for communication (shared meals, markets...) Multifunctional spaces in Village Open for progress Solar hot water/rain=pool Solar water and electricity/ wind	Weed composts CW Market Bamboo water chestnuts, seed banks, fruit trees, crops Milk Brigade Have fruiting trees as street trees Natural filter Pool (Frogs, food for birds, recreation, beauty) Diverse uses for community areas (Markets music, meals, workshops, dancing...) Community car: Green car Green Roof One world Dome (earth) : connection to spirit, gatherings of people, work place, made of earth (dug out), beauty and more

	breaks Windows	
MULTIPLE ELEMENTS Children welcome at all gatherings Green roof Deck for education and socializing in village area Connectivity More gatherings Cluster gatherings Think globally Encourage working collaboratively	USE SMALL AND SLOW SOLUTIONS Make compost, don't buy potting mix Culture evolution Invest in our children If it feels good go for it Shared meals to 'Build community' The bakery Divining groups Focus on inspiration Communication PEP days	
MAXIMISE EDGE Welcome to people with little \$'s Working together Harvest the Water Lilies Roads across Dam wall Walking tracks help maintain country Encourage niche business Fruit trees along roads	ENERGY RECYCLING Share transport, pick up hitchhikers Using Grains to create energy/ electricity for community (e.g. Instead of coal burning) Collecting rain-water Energy pruning remaining on CW Composting Growing Built houses with Earthcare Education Community building-support people to be here Grow food Woodchips from roadside clearing shared	DIVERSITY Take only what you need, choose many places always leave some Woofers and maximizing of cultures Try to understand people's differences Seek resources and support from within community Creating habitat for wildlife Integrating Become better recyclers Always improve communication
PATTERNS, RELATIVE LOCATION, ZONES Pattern language implicit in village, Our water system Non-hierarchical organizational structures Boise Knowledge library Bigger animals at edge	ELEVATIONAL PLANNING Solar panel Windbreaks, Betting houses More gardens Lay in the sun go for a walk Water tanks, nutrient flow, High poison OF COMPOSTS More solar panels to earn more \$. Free energy for all.	OBSERVE AND INTERACT Car share system Press button Info board Music Hall or House for Adults and children Get Involved Help the co-op Volunteer

	Planting long term timber Plantations More water tanks Our Dams Geometry on power spots Store preserve food from garden and other natural resources	
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OUTCOMES cont. : PERMACULTURE ETHICS

<p>CARE OF SPIRIT</p> <p>Sharing passion Social gatherings Community events Embracing our natural surroundings Care of spirit and easy connection to the nature Labyrinth New moon women's circle Yoga classes Growing Plants Participation in community events Lot 6 meditation room Creeks Building community through communication and support New moon women's gathering Labyrinth Nature, peace and quiet Events New moon women's gathering Full moon meditation Rural retreat Ceremony acknowledgments at gatherings, Labyrinths Community events Welcome and dedication at events and gatherings Being thankful PEP day Market day togetherness Yoga Community events and spaces Music Markets</p>	<p>CARE OF PEOPLE</p> <p>People workshops Home PEP / Welcome tourist / Share food Saturday Markets and Visitors area Providing Places for people to stay at low or no financial cost Co-op Organics gardens, workshops and music gatherings Designing spaces that include children and adults (e.g. Sound space) Looking after coop finances ingoing and outgoings Yummy bread Like-mindedness CW Bakery Save Shelter Children playground carousel Caring for sick neighbors Visits with food Welcoming nurturing community Playing music for all to enjoy Workshops Speed limit PEP days</p>
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<p>Sharing passion Social gatherings/community events Embracing our natural surroundings</p>	
<p>SHARE OUR RESOURCES Dairy collective Bamboo farm People energy (PEP days) Bartering goods with neighbors Swapping goods Energy surplus exchange Safe, pollution free (relatively) environment Neighborly cups of tea Sharing CW with Woofers Open garden shade home with family friends and neighbors Having communal spaces A place where we get together, village green co-op Abundant sharing of excess e.g. oranges Teaching and learning from each other Planting food crops Honey Market workshops recycling composting Fair share at CW...? 'Equal pay for equal work' versus volunteer ethic Market Market day Workshops Contributions Plant Cuttings from neighbors Market Skill share</p>	<p>CARE OF THE EARTH Sustainable agriculture Weed Management No commercial + consumerists (big shopping centers) Non-chemicals Watching over native fauna Reforestation Re-use grey water No pesticides Crystal Waters Market Avoiding chemical use Pumping Water from the Mary River Protection and Nourishment by placing plants Dealing with waste streams responsibly e.g. Composting toilets Clean air Not using herbicides pesticides Practicing organic agriculture Being invited to dowsing/divided their property Regeneration Grow native trees and plants that attracts animals Planting composting bio-char and PEP Creating Harmony Fresh creek water Weeds energy levy Weeding Intent of divine connection with others Planting trees weeding and recycling Careful animals Living in community Care of the wildlife Planting for putting nutrients back into the soil Permaculture Provide for animals</p>

TEA BREAK :) (While we talked about the examples we had heard from the rest of the group).

Session 4

During the break, Robin's team had been placing the David Holmgren's permaculture principles next to the ones we had been working on in the last exercise. The new ones are an evolution of the first ones.

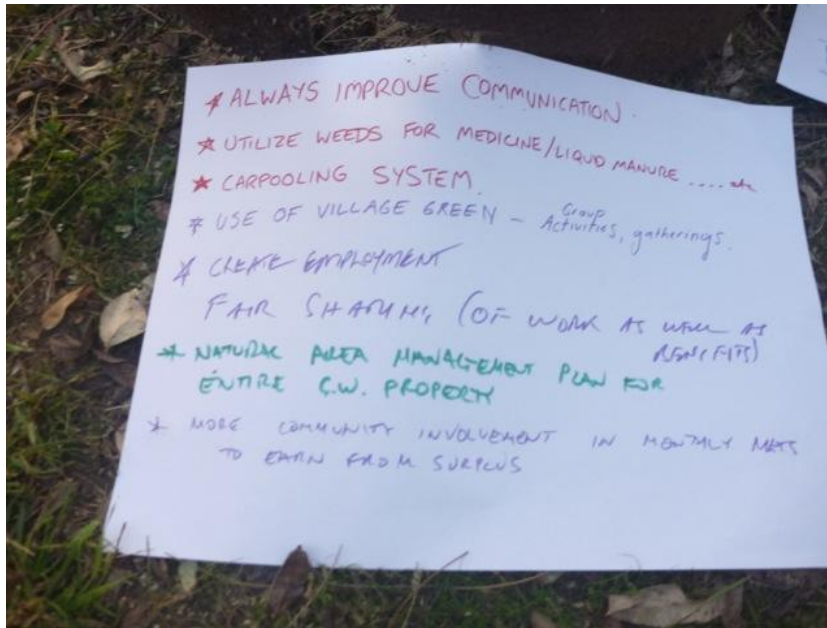
In 10 minutes, with more yellow paper, people had to write examples of principles embodied in CW relating to David Holmgren's principles and place them in their corresponding place. To share the outcomes, different people from the group read them out loud in order.

Session 5

Some of the outcomes sounded like dreams; others, like possible ideas to apply. So the next exercise asked: What can we do better or do more of something we are already doing in CW? Robin places 5 blank A3 sheets of paper on the floor in a corner. People had 5 minutes to write down their suggestions.



These photos show the process:



Session 6

We moved to the grass looking for warmth in the sun and we played the 'Patterns' card game. The objective was to be inspired to *create*, by the patterns in Nature.

The game has different colored cards - the yellow ones are pictures of patterns you can find in Nature. People had to pick up 2-3 cards without looking the picture. On the floor, Robin placed the name of the different patterns we can have, e.g.: Lobes, streamlines, scatter... People had to put their yellow card into the group it corresponds with. Some, of course, could go in more than one place. When we finished she asked if there was any possibility to change and we became free to place the cards in other groups.



SESSION 7

Our task was to go into Nature and find elements that belong to the different groups of patterns and let them inspire you to design something you would like to create. It could also be something 'social,' and we were aware of the patterns that we have already designed. We could work alone or in pairs (but better alone and then 'cross pollinate') (20 minutes)

Some of the group showed to the rest their creations.

E.g.: "Robin is a pattern full of patterns!"- one of the group explains...



We closed the day with a little ceremony around a fire. Everyone in the group had to put in the fire any natural element (a leaf, a stick, stone...) and say a word that represents what they have seen/experienced during the day. We gave with our hands and intention some energy, all together.



Fire and permaculture stories with Christine's beautiful music on the guitar



DAY 2 SUNDAY

10am

We made a circle. Robin gave thanks to the indigenous peoples of the land. Then she explained the planning of the day and put books and products on a table that people can purchase.

Today more people joined the group so we made a beautiful dynamic process to get to know each other, and the newbie, in the group. Everyone in order had to say their name and if they were a tree this morning, what tree would they be?

After that, Robin asked: - "Has anyone had something pop into their mind or any inspiration last night?" Here there are 3 of the different testimonies:

- "How lucky we are! How many things we have in CW!"
- "I realized that this is what I want to do..."
- "This is an opportunity for other people to step forward and be holistic."

Before we left the circle, Robin reminded us of the importance of reviewing what we had seen at home to integrate all of the information seen during the day.

SESSION 1: HOW TO MAKE A LITTLE GARDEN IN FRONT OF THE COMMUNITY'S NEW SIGN

Once we were in front of the CW sign where we were going to make a little garden, we started to observe the characteristics of the place, such as sectors, zones, types of possible plants, maintenance, possible weeds, aesthetics and needs of the community.





Robin shared her ideas with the group. Here you have some of them:

- Use chips mulch (For less weeds)
- Plant Marigolds (No high level of maintenance)
- Plant Comfrey (Will help to crack the soil down)
- Plant Aloe Vera (Good for burns. The garden is located in a community area)
- Plant French sorrel: (Gives us different shades of green)
- Use newspaper and big rocks (Exclude the weeds)
- Check service lines etc (Make sure we don't hit any while digging)

She observed that we were going to have dust, a little pollution from the cars, people walking around etc, so it would be better to clean the veggies before eating them.

During the next few days the community could bring compost, worm harvests etc - anytime, to build up the soil.

Here you have the materials that we need:

MATERIALS

MINERALS

STRAW (soaked)

NEWSPAPER (soaked)

HORSE MANURE

BIG ROCKS

WATER

SOME PLANTS AND SEEDS

EAGERNESS AND LOVE

STEPS

1. To start the garden you use some lime and draw the edges of the design on the ground, otherwise you can draw it directly on the dirt



2. Dig a little trench/line on the drawing



3. Put wet newspaper on the trench



4. Place big rocks in the trench, on the newspaper, making the edge as high as possible. Enjoy the game of fitting the rocks together, like a puzzle.



5. Hold the paper back to make space for the soil



6. Put the soil in (we had just dug it out from behind the sign)



7. Add extra organic chicken pellets and minerals and add more soil



8. Add horse manure, put more wet newspaper, and fold down the newspaper you held back before



9. Add more chicken pellets



10. Water, and more chicken pellets



11. Soak the straw, mulch the garden pretty thick, and make sure you put the straw right down into the edges. Try to mulch with some air so that it is not too compact



12. We put some big pieces of bark (make sure no weeds underneath) around the edge of the garden, so then the wind doesn't blow the mulch out (When we analyzed the sector we observed strong wind)



13. (If you do have cardboard and wood chips, you can put them around the outside of the garden to stop the weeds and make a nice path at the same time) Also you could put compost on top of the garden.

14. When planting the seeds or veggies, use rich soil from a garden, and don't break the newspaper (in case weeds get through!)



While some of the group are planting veggies and seeds, others restore the labyrinth!



Our beautiful little community garden is done! Let's go to Robin's place!



Robin gave us a tour of her property paying attention to the existing permaculture principles and also pointing out the things that could be better. She shared with us her future plans. All this was followed by a beautiful meal in her garden.

SESSION2: LET'S MAKE COMPOST WITH SHAW

Shaw started to explain what compost is and how microorganisms are happy to help to generate heat and make compost faster. Also, it is important to take into account other variables, like the elements that you add to your compost (nitrogen, carbon, water, oxygen etc) and make sure they are in balance.

To understand which ingredients we can add to the compost, Shaw asked the group to write them down on pieces of paper and then place them into the element groups:

Nitrogen	Carbon
Grass clipping	Bamboo leaves
Horse poo	Shredded paper
Weeds	Cardboard
Veggie Scraps	Straw
Seaweed	Twigs
Comfrey	Leave litter
Punning	Biochar (charcoal)
Water weeds	...
...	

One of the people in the group asked if it's good to put molasses (simple sugar) in the compost. Shaw suggests that it could be good, however, it works better for him if you put it directly into your garden bed because it makes bacteria grow faster. Molasses can unbalance the compost. One good idea is to add less compost to your garden bed and then add molasses which will help to grow bacteria, compost and build up soil.

From this point Shaw explained to us the difference between bacteria and fungus. The first is related to plants; they like nitrogen and are the faster at breaking down matter. Fungus, which is related to trees, is smaller but very effective in breaking down wood material. You can use either bacteria or fungus to build your compost depending whether it is for trees or plants.

NOW IT'S THE TIME!

...3 days before Shaw's explanation to the group, he, Lisa and I built a hot composting pile.



Here is the recipe:

Materials

(4 ingredients: brown, green, manure, water)

- Green: weeds (as much diversity as possible) Good to use the ones you have around your place, they have already the native microorganisms good for your plants
- Brown: dry leaves, wood chips from different trees, straw (as much diversity as possible)
- Manure: horse manure (considered as nitrogen) + chicken manure
- Water (soak all the ingredients in water)

Steps

1. Place all the ingredients close where you are going to build your hot compost pile



2. Chop the green and brown stuff in small pieces so that it can break down more easily (also, having everything chopped small helps you to turn the compost later)

3. Soak all the ingredients (brown, green, manure) Make sure you have **MOISTURE!!** At the end of building your compost, it should be 60% moisture, so that when you take one handful and squeeze it you get 1 drop it! (Hooray - you did it well!!)



4. Water the ground that is going to be your base.

Initially you want to compact the ingredients (but ONLY the first time when you build it; when you turn it, you want it fluffy).

We want more or less the same weight of green and brown (but remember that green has more volume but less weight than some of the brown stuff like woodchips, so the green layer should be thicker than the brown!)

It is good to mix the grass clippings with a few woodchips because it is very high in nitrogen, and you don't want to have a layer of high nitrogen that stops the air getting through. The woodchips make little air holes, helping the break-down process.

5. The first layer is brown stuff: Woodchips



6. Green stuff



7. Manure



Every 2-3 layers add water to make it moist and compact. The risk is to have an anaerobic process (with no air microorganisms die! we don't want that), so with a pitchfork give some air.



8. We start again: Brown stuff, woodchips, brown leaves, straw....



9. Green stuff

10. Manure+chicken pellets

Compact and water through the process and give some air with the fork



Almost halfway up, even though the next layer should not have been brown, we added some sticks to make air pockets. The centre of the compost naturally has the highest temperature - which can kill good microbes and allow for bad microbes to enter, i.e. those that sting and are bad for our health - so it is very important to have good air-flow in the middle of your compost. We don't want an anaerobic process happening under our noses.



11. Keep going' up! (Brown, green, manure+chicken pellets, water...)



Usually the last layer is brown, a very good option is straw.



Don't forget water! We need around 60% moisture!



To protect the hot compost pile from animals or from strong rain, cover it with something like cardboard.

We don't want a temperature higher than 65 degrees inside the compost, so use a thermometer.

And no; there is not some unique recipe or mathematical amount of each ingredient; INTUITION and EXPERIENCE are going to support you :)

HOW TO TURN THE HOT COMPOST?

After learning some theory of how to build a compost pile, the group visited the pile we had prepared three days earlier to learn how to turn a compost successfully.

When you want to turn your compost you will need a Fork and Water.

You are going to start from the outside and place all that material in the center/middle of the new pile, and also the material that you had in the center is going to be placed in the external of the circumference. That's it!

In the next session we split into groups. Some went with Shaw to make hot compost and others went to build a garden.

SESSION3: HOW TO MAKE A SHEET-MULCH GARDEN

Robin explained why she has chosen this place to make a garden, what was here before and what she plans to do. The plan: to build a zone 1 garden of solid vegetables.

MATERIALS

Hessian sacks

Minerals

Newspapers (soaked) *You could also use cardboard

Straw (soaked)

Horse manure (soaked)

Wood Ashes

Dry leaves like bamboo leaves.

Water

1) Soak newspaper and straw

2) Map out your design on site with the sacks. A great design is the keyhole garden - where you can stand in the middle and reach around yourself to all parts of the garden.

3) Sprinkle minerals (natural products - you can buy them in shops), wood ash, chicken pellets, and more water around the hessian sacks where the veggies will be planted.



4) Put horse manure on top

5) Lay the wet newspaper on top. 6-7 sheets in the same spot. Put newspaper under the edges of the sacks too, and try not to tread on the newspaper - all this will help stop weeds growing through.





6) Put more wet horse manure



7) Put on straw and dry leaves (both soaked)



8) Some horse manure more and chicken pellets

9) More water

10) Straw and dry leaves on the top (banana leaves work very well)

11) More water

12) Horse manure and chicken pellets already wet



13) And wet straw to finish



CONGRATULATIONS!!!!



Robin checks in with people's energy... "How do we feel about continuing?"
We split into two groups: People who like to learn about bamboo fencing and people who are interested in harvesting banana fiber for weaving. Some pictures below:













Thank you so much to all the people who participated in this beautiful weekend and thank you Robin for making it happen :)

BE CREATIVE, BE ALIVE

Rut Noemi Nicolau Ordinas (RuMi)