



Yeoman's plough bites the dust in WA

By Charles Otway

Part 2 on
Yeoman's
plough



The Yeoman's plough workshop was an informative but casual affair on a stunning 'winters' day at Robyn and Johns Longley's lovely property in Stoneville. A dozen or so of us took a journey together discussing the principles of and then seeing Yeoman's subsoil contour ploughing and discussing and imagining the further possibilities.

Harry Wykman, as always, was the brains of the operation and ran through the theory touching on the larger topic of P.A. Yeoman's keyline farming technique, but spent most of the time explaining the primary land unit and ridges valleys, key points and associated keyline / contour.

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e-News contributions welcome

PermacultureWest e-News is actively seeking articles. We welcome any information or events you would like to share with the community. If you would like to contribute please contact enews@permaculturewest.org.au or contact Jo on 0421 589 548 or Rachel on 0411 478 424.

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From the co-editor

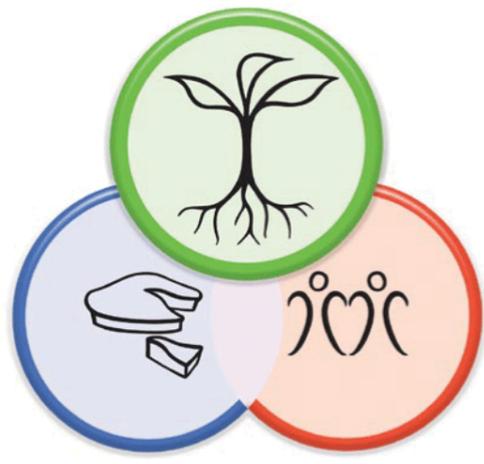
By Jo Thierfelder

I was recently inspired by dedicated volunteers at Silver Tree Steiner School in the hills who are working ferociously to establish a vegetable garden, orchard and outdoor kitchen, all of which will be incorporated into the curriculum at age appropriate stages.

Silver Tree is a model of sustainability. In the 12 months since the school opened, they've installed four water tanks storing just under a million litres of water, a blackwater treatment system and a 4.8kw solar panel system which provides a third of the school's power needs.

More impressive than infrastructure is the incredible power of community at work in this school, much of which is a credit to volunteers. What an amazing bunch of people who give so much time and energy expecting nothing in return. It is both inspiring, if not slightly daunting, but it makes me want to get involved too.

Please send your articles to: enews@permaculturewest.org.au



Earth care

Rebuild Natural Capital

The Earth is a living, breathing entity. Without ongoing care and nurturing there will be consequences too big to ignore.

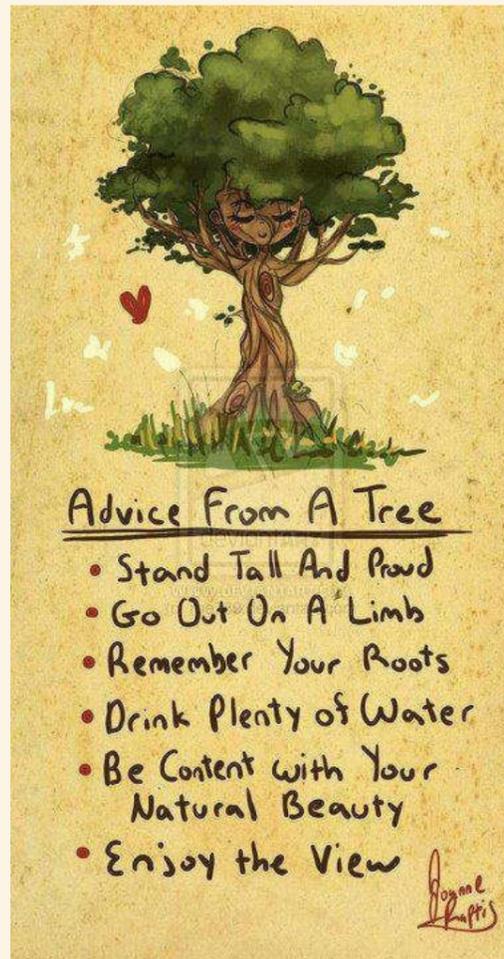
The icon of the young plant represents organic growth, a key ingredient in sustaining life on Earth.

Care of the Earth can be taken to mean caring for the living soil. The state of the soil is often the best measure for the health and well-being of society. There are many different techniques for looking after soil, but the best method to tell if soil is healthy is to see how much life exists there.

Our forests and rivers are the lungs and veins of our planet, that help the Earth live and breathe, supporting many diverse life forms. All life forms have their own intrinsic value, and need to be respected for the functions that they perform - even if we don't see them as useful to our needs.

By reducing our consumption of 'stuff', we reduce our impact on the environment, which is the best way to care for all living things.

Text and images courtesy of www.permacultureprinciples.com/



Advice From A Tree

- Stand Tall And Proud
- Go Out On A Limb
- Remember Your Roots
- Drink Plenty of Water
- Be Content with Your Natural Beauty
- Enjoy the View



Djilba

Noongar seasons

Usually the coldest part of the year, with clear, cold days and nights, and warmer, rainy and windy periods. Roots were collected, emus, possums and kangaroo were hunted.

This season is a peak flowering time in the Fitzgerald Region. Many orchids bloom in August.

Co-convenors' Report

I hope you enjoy another fantastic edition of the PermacultureWest eNews. It truly is a great way of sharing knowledge, experiences, and networking in WA. We encourage submissions of all levels of observation, knowledge and skills as everyone is a different way along the learning journey and we all want to hear about the next steps.

The time of year for us to start planning our AGM is coming and I for one am very aware that a lot of members have offered to volunteer their time and support for the association and committee, but we have not had the time and people power to follow up those offers and mentor you into suitable roles.

While this has been an opportunity lost last year we don't want to repeat that. As a favour to me (given it's mainly my fault ☺) could everyone that offered anything from helping staff stalls, to picking up some of the financial account keeping please let us know again on info@permaculturewest.org.au or respond to the email I will send shortly to everyone?

We would love a second chance to harness your energies and experience to grow PermacultureWest.

PermacultureWest currently has the financial capability and there is certainly the social need, to grow and help develop a regenerative, re-skilling permaculture movement in Western Australia's urban and rural areas. This will take a team of self-motivated groups within and external to permaculture working together to best manage their

opportunities. It would be great while we have some senior and experienced committee members to develop and mentor support groups around these individuals and fields.

The AGM is likely to be a forum of both experimental edge permaculture (biochar creation, edible weeds and foraging, food forests and support

species, etc), and entry-level living skills (soil and food growing, wholefood production, and neighborhood and community development).

If we get this happening it would be wonderful to see the full support for permaculture in WA attending the AGM. There is no need for those attending the workshops on the day to take on roles at the AGM but the show of support from your attendance will show us we on the west coast have as much desire and

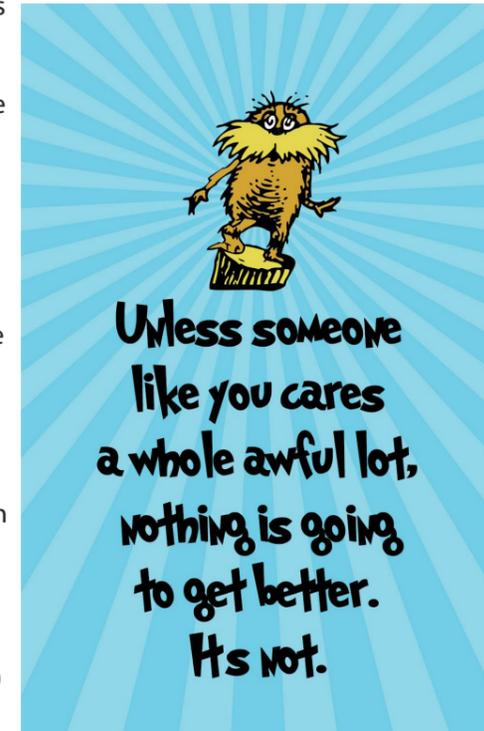
enthusiasm as the east coast.

This year has seen the committee realise the most effective things we can all do is act locally in a networked and skill sharing manner to showcase, demonstrate and encourage intelligent and ecological local design and lifestyles. This means everyone's journey and experiences are useful and needed no matter how small or token you feel your first steps are. You are the change, you are the inspiration, your peers are learning from your actions, so let us support each other's growth at this important and changing time.

Cheers,

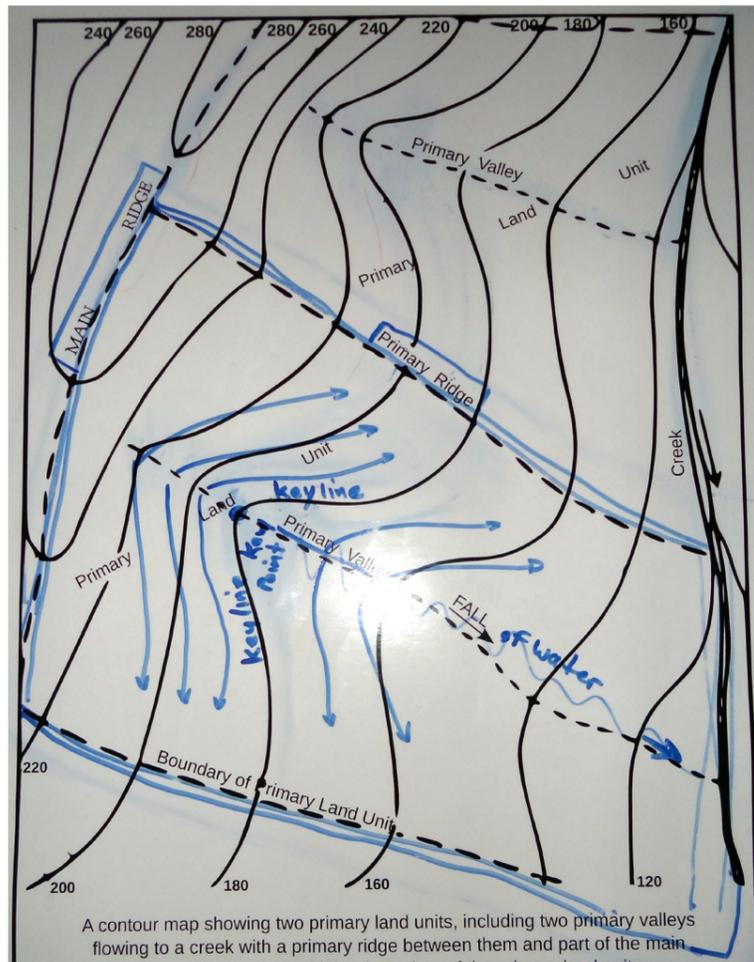
Charles Otway

The most effective things we can all do is act locally in a networked and skill sharing manner to showcase, demonstrate and encourage intelligent and ecological local design and lifestyles.



...continued from page 1

The main concept to grasp was the function of the "primary land unit", as boxed in blue. This is a section of any landscape that can be identified to allow a site specific but (once all primary units are connected) integrated water and nutrient management plan.



Once that is identified we begin looking for the key point and key line on the contour maps (at 5m contours preferably).

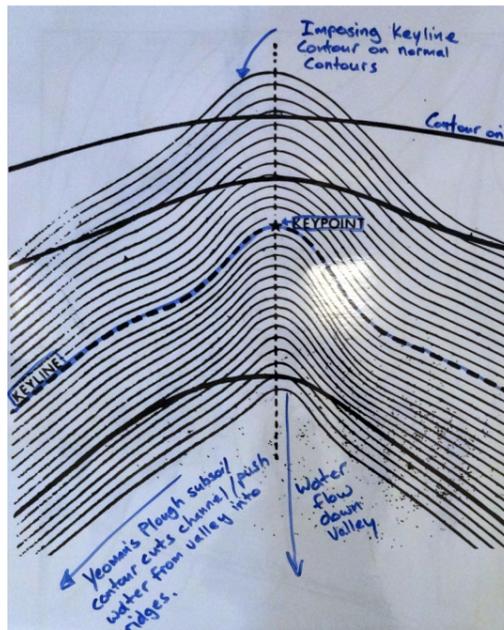
It can be described as the contour with the most slope / change or the point of inflection or where the valley's land-shape switches from convex to concave.

One of the primary aims of the keyline system is to get the available water / rainfall into the soil rather than to have it running off. By using the subsoil plough to cut grooves in line with the key lines contour, the water that would normally rush down the valley is channeled into

the ridges instead. Thus we hydrate as much of the soil area as possible.

Robyn and John's property did not provide us with a primary land unit to base a keyline plan and thus impose the keylines contour on the rest of the valley.

While this isn't ideal we must work with the land we have and in this case it was



a gentle 'Perth hills' slope among gum / grass tree scrub.

You can see a bit of the action here on youtube http://youtu.be/fm_9xls2IGU and <http://youtu.be/89qNtUNAzgU>

The basics of contour marking were demonstrated using a laser level to pick, in this case, random contours spaced by 5-10m to be ploughed. As we did not have a keyline to impose on the area we measured multiple contours and adjusted the contour cuts every 10m. This demonstrated one of the advantages of the keyline plan for a primary land unit: it allowed one contour shape to be imposed on the whole land unit making ploughing much easier and not wasting land or having messy cuts between each 10m measured (different) contour.

We did not seed or apply any bio-fertiliser as this was a simple trial of the plough and an attempt to de-compact the soil, stimulate local pasture seed

bank in the soil and deepen the air/water and thus hopefully pasture roots.

This soil depth and pasture species photo was taken so it will be interesting to see how it has deepened and diversified with this very simple intervention in one year.

This is one of the great things about being involved with this project, we will be documenting and witnessing the effects on various WA soils and climates. Modification to technique and plough infrastructure will be adapted to maximize its effect.

Please get in touch if you would like to see the unit in your community in the future. There will be a modest hire fee that will fund the additions planned to move the basic unit to a de-compacting, bio-fertiliser injecting, seeding terra forming tool for the WA community.

As discussed there is the desire and need to set up something similar to the super plough as discussed in the last eNews. Additions and modifications will be depth control wheels, shank pot seeders, liquid bio-fertiliser / compost tea tank and injection system and if needed tine pre-cut coulters. We would love your help and input in developing this community asset.

Cheers,

Charles Otway and Harry Wykman, Junior Plough Men



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Food from sand

In-ground clay-lined Hugelkultur wicking bed trials

By Charles Otway

I'm taking a long term view in changing all my beds to clay with the view to moving to lower yield perennial food systems based on productive trees.

After spending two years observing the excellent water and nutrient holding capabilities of in-ground wicking beds lined with 200 micron builder plastic, it is time to prove another aspect or technique.

I've begun experimenting using clay-lined beds to create a reservoir or at least a perched water table to interrupt leaching and while I'm at it I've thrown in some Hugelkultur ideas to add bulk slow release organic matter and extra nutrient retention.

Bentonite clay is expanding clay used by dam builders to seal leaking dams. It is these properties that allow it to be used to hopefully provide a medium term (2-3 years) seal below a garden bed in a similar manner to the builder plastic sheet. While clay is an essential addition mixed into sandy soil, in this case the clay is being applied in a thick layer once a level garden bed has been created in the soil profile.

I'm taking a long term view in changing all my beds to clay with the view to moving to lower yield perennial food systems based on productive trees. The fact the clay, soil and moisture will in time be attacked / broken up by tree roots is not seen as a disadvantage but a bonus. In two to three years I will have a highly-clayed, fertile, soft, growing zone for fruit trees and larger perennials, and will move high yield annual vegetable systems into other areas and systems.

For those wondering, the builder plastic was still in as new quality and strength where not exposed to light. I made holes in it but it would have been a barrier for many more years; another reason to get it out.

The in-ground aspect of garden beds appeals to me, as I see raised garden beds as having very limited justification (unable to bend, elevation to keep out pets, school gardens), most of us should

not have these as defining limitations. In ground beds use the soil as it should be - you are in contact with the mother soil, the soil temperature, and the soil food web. Also in this case I am building on the verge above essential services so at any time the council or service provider may come and dig up or at least need access to the ground. Large infrastructure heavy raised beds are more permanent and therefore cause more dramas.

So first we dig a grave. Seriously, it looks like I have buried four very large people in my verge.



Moving out to the verge was a deliberate one to achieve many things at once:

- utilize the good 5-10cm black soil under the deep woodchips that has formed over two years
- create a winter growing high yield area 10m x 3m (30m²). Most of my backyard is shaded for half the day by my trees
- challenge the public perception of garden being out the back and out of sight
- engage with and give opportunity to the increasing number of triplex residents who have no space to come and garden with me and share their food waste and energy.

While the area is highly exposed in summer, worst case I can plant sweet potatoes and yield tens of kilos of tubers and a never ending supply of healthy summer greens (sweet potato leaves).

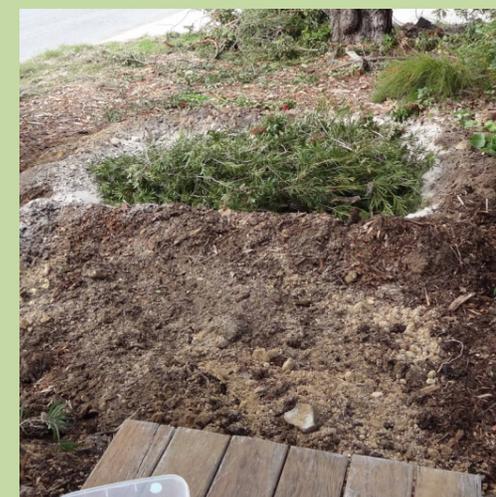
The idea is to dig out the topsoil, retaining the best and making another pile of the worst plain sand. Once the hole is 30cm deep, flatten / level the bottom and around the sides. Dry clay has a slumping angle so trying to create steep, deep clay zones is futile unless you



apply it wet like glue. Spread the dry clay so you get a continuous layer of 20mm or so along the base and up the sides about 10cm if possible. While the sides are not essential I think it will need less frequent watering in summer if I can apply more water less often, and have less risk of the nutrients leaching / overflowing out. Note that this clay can expand 5-10 times its size once wet so a rough 20mm thick layer should be plenty once it hydrates.

My garden beds are generally 2m long by 1.2 wide. This width is used as you can access them from both sides and reach around 60-70cm crouching and leaning. Note these beds should never be stepped on and compacted. Use wide walk planks if you need to. I chose these dimensions as it allows me to frame the in-ground bed with the old jarrah sleepers if needed. There are a lot of benefits having a formal edge to your garden beds that is trafficable, especially when you have you kids. Basically the bed is one sleeper long by half a sleeper wide, there is no need to 'join' them. This leaves the arrangement flexible which I like.

After the clay layer, and while it was still dry I threw in all the tree prunings, branches 50mm thick, leaves, whatever there was, and cut it up enough so that it had a low enough profile to be less than the 300mm deep hole. If you add water to the clay layer alone you must do it via fine mist or very slowly else you will blast a hole in your 'liner'.



This is the hugelkultur aspect. Sepp Holzer put in whole trees into his contour beds on the alpine slopes of the Kromatahof. While we don't have frozen compacting soil to deal with (one of the main advantages of hugelkultur see more here <http://www.richsoil.com/hugelkultur/>) we do have sand with no organic matter or nutrient and water holding capacity. So the idea is to put lots of carbon in the bottom of the hole to create the 'water zone' of a wicking bed, and get lots of high nutrient compost and manures above it to grow on.

So the idea is to put lots of carbon in the bottom of the hole to create the 'water zone' of a wicking bed, and get lots of high nutrient compost and manures above it to grow on.



Granite rock dust



Basalt rock dust



Kelp powder

While there is much that might happen that is not expected, the primary needs of water and nutrient retention and leaching reduction should be sorted, and unlike the plastic lined beds the further needs of evolution into a permanent perennial food forest should also be well supported.

In this case I was fortunate enough to have one year old 100mm thick street tree mulch everywhere, which was full of fungi. So a good 50mm layer of the best stuff went on top of the rough prunings. The idea here is that the fungi will migrate to the prunings to break them down further, fast-tracking the deep topsoil fertility development.

Next I added minerals, liberally broadcasting granite rock dust, basalt rock dust, and kelp powder on top of the fungi. Fungal and bacterial networks farm trace elements and minerals and trade with plants for their sugars so I thought that I would make them nice and close.

Our sandy soils in Perth are very nutrient and mineral deficient it is essential to remineralise your food system. You are what you eat, if there are no minerals in your plants they will both suffer deficiencies and poor growth and not be much good for your body's vitality after eating them. Rock dust is a slow release method of remineralising, the Basalt dust from Bunbury Quarries (Hansen and Gaucci) are much more mineral rich and soluble than the granite. While trace element powders can be bought from MultiTech and other companies these are highly soluble fine leachable additions. The leached soils occurred in the first place so adding more stuff that rapidly leaches away is not helping anything.

I put off ordering good bulk compost, manure and vegetable soil for a year or two as I did not have the organic matter and clay in the soil to hold onto all those goodies. I did not want to suffer what most beginner gardeners do which is buying great soil, putting it on sand and next year finding it has all disappeared. So I finally bought \$600 of vegetable concentrate from Greenlife soils as my soil was ready. This was the

'soil' that I used in the top of the wicking hugelkultur beds. This batch looks a mix of lupin compost and animal manures with rock dust, and smells like rich earthy goodness. It is advised in normal cases to combine 50-50 the concentrate with your own local crappy sand base as it is very strong. While that's sensible it doesn't deal with the cause of the crap soil in the first place - leaching and poor retention capabilities in the main soil. So as good as this fancy imported soil is, alone it is just an expensive short term fix without long term soil carbon (organic matter) and clay.

The reason I personally don't rate Zeolite and Spongelite as essential in Perth's sand dominated garden beds is that while they do have a high CEC (Cation Exchange Capacity) they are 'inert'. That is they provide structure, air and hidey holes for fungi and bacteria due to their sponge like structure, but they are not nutrients themselves. As good as that structure aspect is there is already lots of sand providing that free draining, aerated soil, and the essential organic matter, humus and compost we must add anyway has similar CEC to Zeolite and Spongelite and this organic matter feeds the soil microbiology. Hence their benefits are redundant.

Clay on the other hand is essential in creating high yields systems from sand. Clay is like the glue of the soil it makes everything stick - water, nutrients, organic matter etc. It also has a high CEC, so it ticks all the boxes. The only other long term ecological method of soil / system building is using plant based biomass mechanics to vegetatively 'hold' water and nutrients in the system. While this is the best system and the only broad scale agricultural and land repair option it is harder and unfamiliar to most gardeners in small urban systems.

I did add some gray sand (my normal soil) to the vegetable concentrate to pad it out, maybe 100mm of concentrate, 50mm of sand and then topped with a bit more concentrate. And the final / temporary top was crappy sand to protect the goodies below.

Now to answer your questions:

No I didn't use any barrier to stop the soil / sand / compost from silting down into the 'wet zone' and mulch / pruning zone. While the water-holding capacity of that zone will drop off I don't see it as a deal breaker given I am evolving the beds to not be wicking beds over time anyway.

No I didn't add / use a slotted agricultural pipe of similar to get water in and air in. While its important to do this to allow oxygen under the soil in a wicking bed to avoid anaerobic conditions again given the way I have made these beds I don't see it as essential.

Where did I get the ingredients?

The clay was from a bulka bag, 1 tonne from Milne StockFeeds (stockfeed suppliers are generally the cheapest source). I don't advise using 20kg bags at \$25 each to do this as it might take three per a bed. If you can handle it, and or share it, a 1 tonne bag is only around \$200.

Granite Rock Dust from Greenlife Soil Company (a coarse very slow release product not their Rock Dust mix), Basalt Rock Dust from a Permie friend (sourced from Bunbury), and the Kelp Powder (Italian) is from Gngangara Rd StockFeed. If you head to Lancelin or somewhere out of the marine parks you should be able

to harvest ample seaweed on the beach. A 20kg bag of Kelp Powder is \$80, so it's worth the effort. You are after the thicker wet shiny kelp not the light shredded papery stuff.

High fertility growing soil was Greenlife Soils Veggie concentrate with the 5m³ bulk delivery enough to do more than 30m² of garden beds, so most of my now improved or clay lined growing beds / zones.

What can I plant in the hugelkultur clay-lined wicking beds?

I reckon at this stage anything, unlike a plastic-lined bed or one with a permanent barrier / reservoir, these beds should be more like naturally moist soil and the roots can grow through the clay or out of the wet zone if they need to. So larger perennials like kale, asparagus etc should do better in the long term. I have used this technique (but with plastic) for bananas and papaya with success so far, so the clay should be even better.

I am happy to field questions on the post on the Terra Perma Facebook site or via email.

Cheers,

Charles Otway

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Humans hold a biological need for connection with nature physically, mentally, and socially.

Biophilic design could save millions of dollars

By Warwick Rowell

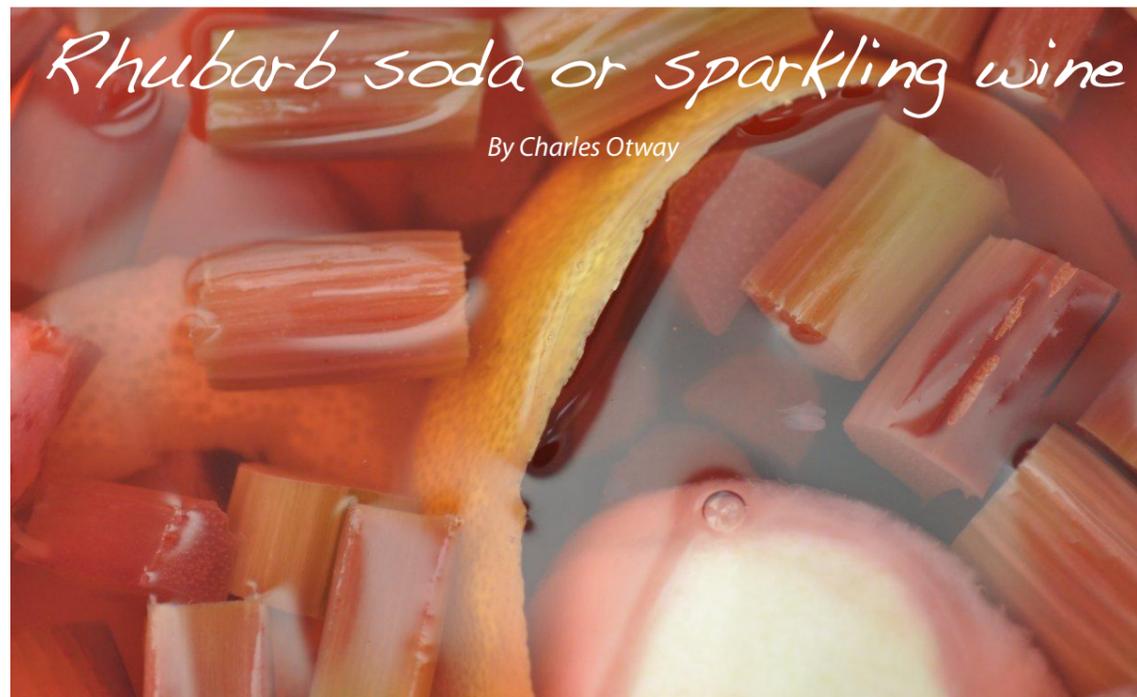
It's official! Earth-hugging greenie Permaculturists save money! Being ecological before economical is, at last, confirmed by the economists.

US consultancy Terrapin Bright Green wrote in its white paper *The Economics of Biophilia*: "Biophilia is the concept that humans hold a biological need for connection with nature physically, mentally, and socially. Biophilic design capitalizes on the neurological and physiological functions associated with contact to nature. Increasing these contacts, the paper asserts, can increase economic gains, improve productivity, and strengthen communities.

The paper compiles a host of existing research on access to nature and its effect on productivity and health. It also quantifies the dollar savings resulting from biophilic design."

To download the white paper *The Economics of Biophilia* visit <http://www.terrabinbrightgreen.com/>

See also: Christopher Alexander et al, "A Pattern Language" p115. Pattern 21: Four Story Limit.



Ingredients

- 1 kg rhubarb stems, chopped
- 1 kg sugar (white)
- 2 lemons, sliced in 4-8 bits
- 200ml tablespoons apple cider vinegar
- 5L cold water

Method

Pre-purchase and cut rhubarb into 1" bits and freeze in a bag. The red colour comes out of the rhubarb stems much better if you do, though the taste / flavour is much the same so it's not essential. I buy a batch of fresh stems cut and swap them with the frozen.

Place all ingredients in a food safe bucket or brewing keg, cover loosely with a clean tea towel / lid and leave for 48 hours.

You can leave it longer than 48 hours but you must remove (strain and squeeze) the fruit otherwise it will taint / rot.

Strain and pour into very clean bottles and seal. I use empty PET (soda bottles have more 'give' so you can monitor the gas levels.) Once the bottles are tight (3-5 days, summer is shorter) you can refrigerate and drink as low alcohol sweet carbonated rhubarb soda.

Refrigeration stops / holds the yeast /

carbonation and the chill stops the drink bubbling everywhere on opening.

For sparkling wine - Store in a cool dark place for two weeks and you will have a drier pink sparkling wine. Chill well before serving, to avoid losing it all as bubbles on the floor and open carefully.

Discussion

I am reducing the sugar as we drink this after one week once well carbonated as it is still very sweet. The sugar feeds the natural yeasts making alcohol and bubbles. The shorter the brewing the

less sugar is used up. If you want a sweet low alcohol cool drink in one week I suggest 750g of sugar and see how it turns out. White sugar is not very good for you, healthier alternatives affect the process too much, so either leave it for two weeks or reduce the sugar. Once the yeast breaks down the sugar, it's not so bad for you.

You can use glass bottles (screw or cap tops) but as this is uncontrolled you might have explosions as we did when I was a kid. Currently I am trialing brown 375ml cider bottles with about 300ml in each one but only stored for five days before going in the fridge until consumed. It is fine but harder to get good carbonation.

Have fun!

The sugar feeds the natural yeasts making alcohol and bubbles. The shorter the brewing the less sugar is used up.



Letters from Lesotho

By Miles Durand

This is the first of my letters from Lesotho. They will appear in *The Times* during my two-year stay as a volunteer with Australian Volunteers International in Lesotho.

It is the start of winter in Lesotho and the Maluti have yet to receive their winter cats of snow. The maize and sorghum crops have been harvested from the stepped, unfenced small paddocks. Their remaining stalks have turned a pale golden brown. Small herds of cattle, sheep and the occasional horse and donkeys with their accompanying herd boys are scattered across the rangeland slopes of the mountains. Tree encircled hamlets and villages dot their lower slopes.

Every morning week day I walk up the mountain road to the main road from my residence the Aloes guest house. Then I flagged down a four plus one which is the name of the local taxi service to the start of the mountain track to Phelisanong. The walk down the track passes a number of homes which are part of the Ha Markhatha village. During the school term my walk is with the children who run down the mountain track to their school at Phelisanong.

The mornings can be very busy with school children at their assembly, the care of the disadvantaged children and the care of the farm animals. I check the progress of the vegetable seedlings in the raised beds which we constructed in late autumn. We have started the pruning of the fruit tree orchard nearest the village. The pruning's will be used for an on-site rough mulch, fire wood and the making of bio-char. Turning a waste into real wealth. Combining ash with animal manure makes for a great organic fertiliser and soil conditioner.

The construction of the plant nursery and garden centre has started with the clearing and levelling the site with construction starting in mid-July. Its purpose is to propagate plants

in particular vegetable seedlings for Pheisanong and local farmers. Demonstration gardens and training courses will be held at the centre. I am planning to hold a PDC (Permaculture Design Certificate) course in November 2013. This PDC is for both Lesotho and international participants (find course details on page ?). Fruits trees, mainly peach trees are very common in the landscape. There is a need to increase the types of fruit trees and introduce nut trees.

The Phelisanong Society is a Lesotho NGO which cares for disadvantaged children. Since 2006 it has established an orphanage, a school, fruit tree orchards, extensive vegetable gardens and farm animals. It receives very little assistance from the government and its existence and future development depends on donations, sponsor organisations and volunteers.

All contacts will be gratefully received and responded to:

- ✉ mdurand@live.com.au
- ☎ M: +266 57360633
- ✉ C/O Aloes Guest House PO Box 2 Pitseng, Lesotho

PDC in Lesotho - Nov 2013

Living in a post peak oil world

This PDC course will be based on experiential learning principals. There is a 3ha village site of the Phelisanong centre with adjacent fruit tree orchards and plant nursery / garden centre. The PDC course will prepare a permaculture design for the village and orchards, 4,000 peach and apple trees. It will be very hands-on, use of appropriate technology and practical course. More than 50 per cent of learning will occur outside the classroom.

The participants of this PDC will include both include Lesotho nationals and

international students. There will be a maximum of 10 international and 20 Lesotho nationals and include at least one person from the 14 surrounding villages. The PDC will be open to Lesotho Agricultural and Forestry departments personnel.

This PDC course will be collaborative in nature with the Permaculture Research Institute (PRI), Machobane Agriculture Development Foundation (MADF) and the Permaculture Education and Design (PED). All profits from the course will remain in Lesotho and will be an example of a social business as formulated by Muhammad Yunis, founder of the Grammen Bank.

The curriculum of the PDC course includes the Permaculture Institute's PDC course outline with a minimum of 72 hours over two weeks. The course theory and practical content will be appropriate to this PDC course theme, living in a post peak oil world. Permaculture A designers manual is the course text book. Course participants will need to purchase a copy before coming to Lesotho. The teachers of this PDC course will come from the collaborative organisations PRI, MADF and the PED and independent teachers from Lesotho and Australia.

Accommodation will be at the Aloes Guest House with a choice of ensued unsits, backpacker lodge and camping. The PDC course will be held at the Phelisanong Centre School, Ha Makhatha and Aloes Guest House, Pitseng.

This a very special PDC course in a most spectacular location. It should be of interest to previous PDC course participants, anyone interested in capacity building in less developed countries and your entry into the world-wide permaculture community of PDC holders. Many learned persons believe Africa to be the home of the human species. It is a continent of brilliant light, great natural beauty and great cultural diversity. And it has massive permaculture potential. There are many permaculture developments in Africa to experience. By taking this journey home you will begin to understand where you came from and where you are going to.

Make this PDC course the start of your African discovery. It will be a life-changing journey not to be missed. Africa is calling you.

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Project Locavore: eating the suburbs in Freo

By Brooke 'Sparkles' Murphy

Aims of Project Locavore:

Yes! It is how it sounds... if you can't eat local you're eating non-renewable resources somewhere along the line. Agriculture accounts for more than 30 per cent of Australia's fossil fuel emissions annually leaving local food production at the top of the list of ways in which you can minimise your personal and global carbon footprint.

The aim of Project Locavore is to give residents access to locally grown, affordable (or free!) organic produce and artisan products. All elements of the system creating these consumables should have been collected, harvested or created within a 10km radius (centred around Fremantle and surrounding suburbs). This project is focused on creating local food resilience. Elements of the project are broken down into the following project categories:

- Community nursery
- Community seed bank
- Community compost facility
- Community share systems – love-a-duck, share-a-sheep, tool sharing, skill sharing, junk / resource sharing etc.
- Permablitz project
- Local permaculture
- Education
- Local farmers' markets

All elements of this project are also designed to be completely replicable in any community.

You might say "well, this is nothing new", but something, other than where this project is placed, makes it extraordinary. Here we are seeing budding alternative trading systems in action and the

complex relationships of advanced living community systems having formed in an unusually short space of time. So, is it just the right season? Or is there something deep rooted we can't see from the topsoil?

Twelve months go, says Bill Mollison, and incredibly true to schedule, the first ever known Western blitz to cost \$0 to implement was run at the end of May in Hilton, drawing completely on the social, material, intellectual and living capital created by the local permies over this time period. Never doubt that a small group of committed citizens can change the world and never doubt that a small group of committed permies can find a way to achieve their goals without spending any money!

Bubbling at the project's heart is the community seedling nursery attached to a local high school and farmers' market; a space that was already destined to become a significant part of the local community. Regular volunteer Sandy said: "Coming here, I get so excited, I just want to go home and plant stuff." In essence, that's what the whole project is about: providing a place of connection for local permies and interested volunteers. A place to gather and grow for young and old, a place to learn and



Students are encouraged as part of their course fees to volunteer and are directly launched into the permaculture community.

create, no stress, just people, soil, plants and sometimes a stick-obsessed dog.

One important and pivotal element to the acceleration of the project has also been in the application of the "common work" philosophy in the set up of the payment structure for local PDCs. Students are encouraged as part of their course fees to volunteer and are directly launched into the permaculture community. The outcome of which is two-fold. The learning opportunities become exponential and the connections created are cemented by shared experiences and immediate common ground. When you find yourself in a social permaculture paradise, it's very hard to leave!

So now in just six seasons, Freo permies are at the market stalls talking to the community about local food resilience, encouraging people and community spaces to take on saving seed for the preservation of genetic diversity and influencing their neighbours and friends to take their green heartedness to another level with the permablitz program.

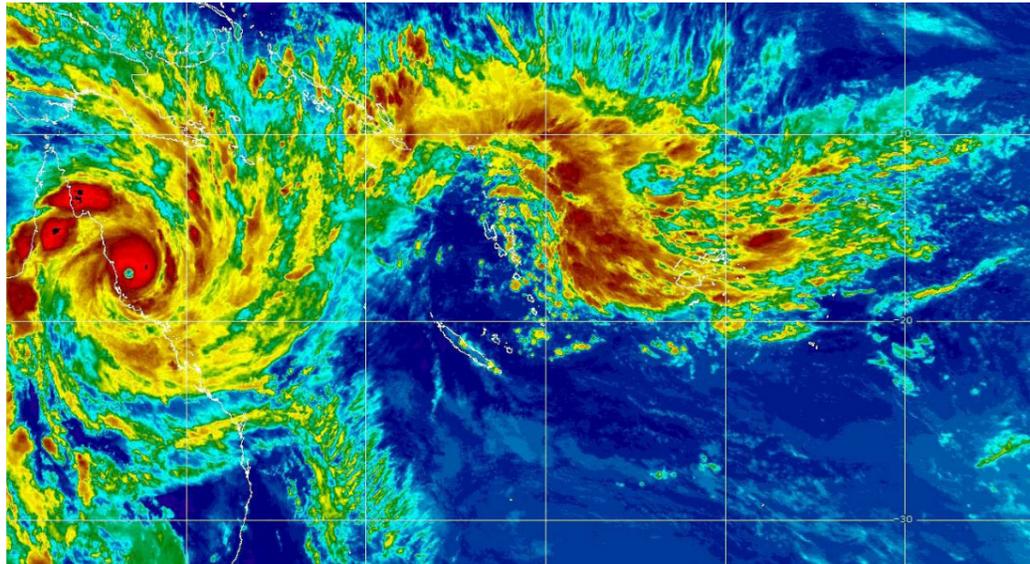
The best part of it all, however, is that all of this can be done by any perma-enthusiast and it's as simple as starting to plant seeds with a few like-minded people who live somewhere near you...

Preparing for a cyclone

Written as we prepared...

By Warwick Rowell

A really severe cyclone hitting this region would be quite catastrophic. We did some analysis years ago of our two major threats: a strong cyclone and a big fire.



On the morning of 28 January 2011, we heard that a tropical cyclone might head in this direction. Having been through Albie in Perth in 1978, and knowing how much damage it did to Busselton and Yallingup, we (three adults) have spent about four hours this morning doing things to minimise damage from wind-blown materials, and thinking about what might happen.

A bit pessimistic? Well, it depends on your point of view, and Permaculture is, after all, about careful observation.

Here is the list of things we have done, or plan to do in basic preparation.

All loose objects outside are secured. One thing we lack is a shed, but that might lead you to a false sense of security, unless it's cyclone proof. We have timber carefully stacked, under two layers of plastic, and weights around every metre of the edge of the plastic. Ladders, shade structures for plants, saw horses, and garden tools have been carefully stacked close to the house, covered with plastic, and they will be held down by lengths of heavy timber.

All garden furniture and wheely bins will be moved inside if it gets closer. Wind chimes have been taken down, so they

don't add extra stress. Pot plants have been clumped, as we have too many to bring indoors.

We have put a barrow of small to medium size (215mm to 150mm) rocks under the overflow pipe of the rainwater tank (4 x 100mm inlets and only one 50mm outlet does not work!) The tank is surrounded by loose grit, so general overflows will be easily absorbed, but the 50mm pipe would be spouting well before that.

External shade sails have been taken down, which is a pity as they only went up in the last day or two.

The fire ute has been started and its battery run for one hour to make sure it goes if it is needed. It already has overalls, gloves, and a variety of big hand saws. The chain saw has been sharpened and run. Our dear little I30 will be moved under cover if needed. We have wwoofers in a pop-up caravan. We will shut it down and remove it from shady trees if needed late tomorrow afternoon. Lots of spare bedding and beds are available if needed. We have wellington boots, rain coats, and hats in accessible positions.

A recent purchase of two-way radios was mainly for communication in a fire event.

The mobile towers would get overloaded very quickly, in our view. Two for \$49.99 at Repco seems like a good investment.

We have plenty of tape for windows, if we think it is needed. Our windows are all of security glass and double glazed so we are at less risk than most others. We also have a line of big rocks to the west that would stop all but the biggest debris in a very fierce storm. They also serve the purpose of a radiant heat absorption layer in the event of a fire from that direction.

Since this article was first written we have screened four western and southern windows with aluminium security door material, the sort made from a 3mm sheet with lots of little holes. Secured 80mm off the glass, they provide a huge increase in security from blown objects. The holes are also small enough to stop embers from sitting on the timber frames. An unexpected bonus is light control; where summer sun and heat used to come in the western windows shortly after midday, we now don't get any sun and heat penetration until nearly four in the afternoon – Permaculture's principle of three uses.

A quick check revealed we're a bit light on long-life or powdered milk, but we have a good stock of beans, rice, bread flour, yeast, pasta, and a deep freeze full of fish and pigeons and kangaroo meat as well.

The solar panels have been flat on the ground, and their bolts all tightened. With 10 days cautious consumption stored in our batteries, we would have to be very unlucky to lose refrigeration, but we do have a back up generator. All the rechargeable batteries in the house have been charged up and we have six different torches / spot lights ready to go.

Now we are just sweating it out. It is very hot, humid and still. Quite foreboding, actually. We'll keep track of progress via radio, mainly, and also the web. A really severe cyclone hitting this region would be quite catastrophic. We did some analysis years ago of our two major threats: a strong cyclone and a big fire. Our analysis of the effects of a strong cyclone was passed to the Shire with a copy of an article describing how,

after Katrina, local government officials all through the central and southern US undertook major reassessments as to their preparedness. There is no point in being well-prepared if there is unnecessary devastation around you.

Postscript

Shortly after the bulk of this article was finished, the eastern edge of the cyclone hit the exceptionally wide Leeuwin current, built up energy from that warm water, skipped 60 miles inland, and then an intense series of storms ripped down the edge of the scarp, from Geraldton to Collie, causing a lot of flooding and wind damage. The eye dissipated and we had a lovely mild day with a very spectacular lightning show to the north that evening.

Charlie Mgee's Permaculture Ukulele Musical project is coming!



Music really is a fantastic tool for getting complex concepts and ideas firmly stuck in your head!

I'm in the process of making a music DVD & CD to teach the principles of Permaculture.

To find out more, and see how you can help, please head to:

www.permaculturesongs.com

Thank you in advance!

THE WORLD' BEST FARMER 1st TIME TO WESTERN AUSTRALIA

Meet the world's most recognised 'beyond organic' & strictly local, clean food farmer, prolific author & inspiring speaker. The ethical farmer featured in the recently released, critically acclaimed, Academy Award nominated documentary *Food Inc.*



A masterful speaker whose humour and positive energy guarantees inspiration, action and activism. This event will cover his entire family farm operation; pastured poultry, salad bar beef, pigarator pork, rabbits & forestry products to the relationship marketing approach his family has mastered that makes Polyface Farm the internationally recognised, but strictly local and very successful farm it is today... **DON'T MISS...**

JOEL SALATIN

Monday 22nd October 2012

Serpentine Jarrahdale Community Centre

Byford, Western Australia, AU - 9am - 5.30pm

\$180/pp Singles, \$140pp Family Friendly*, Kids Under 16 free

Includes Lunch/Teas, Fantastic Door Prizes, Displays & Tastings!



Bookings Essential !!

*www.HDWorldEvents.org

Phone 0431 444 836

We The Trees: A New Fundraising Tool for Permaculture

WeTheTrees.com has launched its permaculture crowd funding platform, bringing a new and exciting tool to the permaculture world, and an ability to easily and creatively raise funds. This platform helps organizations and individuals around the globe gather the resources needed to meet their goals.

The greatest limitation for the permaculture community almost across the board is often that of economics. With access to the right resources, we could achieve more and do it more effectively. WeTheTrees was designed specifically to bridge the gap between idea / design and the resources needed to make it happen.

Visit www.wethetrees.com for more information.



Permaculture
Fremantle

PERMACULTURE DESIGN COURSES

INTRODUCTION TO PERMACULTURE

August 18th & 19th, South Fremantle High School
Lefroy St, Beaconsfield. 9am - 4pm

Curious about Permaculture and sustainable design?
Already grow your own food & want bigger or better harvests?
Want to learn new skills & share ideas with like minded people?

Cost \$180
or
Conc. \$160

In this introduction to Permaculture you will learn a set of transferrable skills and design principles that will help you grow better food gardens and assist you in maximising the yields of all your projects. We will be covering the basics of permaculture design, philosophy and garden skills to begin your permaculture system. We will be exploring global and local issues and their solutions in a permaculture paradigm. Our course includes a composting workshop in the local community garden and is basically two days of wholesome green fingered fun and inspiration!

PERMACULTURE DESIGN COURSE (PDC)

12 weeks part time: Saturdays from Sept 15th, South Fremantle High School
Lefroy St, Beaconsfield. 9am - 4pm

This course will cover...

- Basics of Permaculture ethics and philosophy
- Soil types, science and soil health
- Water in the landscape, harvesting and storage
- Grey water recycling with nature & technology
- Seed saving and genetics
- Bioregional analysis and microclimates
- Alternative and natural building
- Harvesting and storage techniques
- Forest gardening, coppicing, agroforestry, tree crops
- Plants and applications of plants in a sustainable garden
- Composting and natural waste management
- Alternative trading and economics, LETS
- Integrated pest management
- Urban animal husbandry
- Living community systems
- Transition Towns Training
- Mapping and surveying

Cost \$990
or \$880 +5
volunteer hours
or \$660 +15
volunteer hours

Featuring the internationally renowned Greg Knibbs as guest presenter.
Also including experienced facilitation and workshops by the Freo permaculture team.

For more information and bookings please contact Brooke 'Sparkles' Murphy on:
sparkles@permaculturewest.org.au or 0406 449 369

Dynamic Groups, Dynamic Learning with Robin Clayfield

By Jodie Lane, Fair Harvest

International Facilitator and Teacher Trainer Robin Clayfield from Queensland will be visiting Fair Harvest Permaculture Centre in late August to offer her cutting edge 'Dynamic Groups, Dynamic Learning' six-day Creative Facilitation training. Robin receives outstanding feedback and referrals from people who have done her training. The residential intensive is designed to support teachers, trainers, group leaders and facilitators gain more skills, tools, processes and confidence in using creative, interactive learning methods as well as developing planning methods, sharing practical experiences and learning more about learning.

The six-day course will run from 30



August to 4 September (we have changed it slightly to accommodate everyone's needs) with an option of doing the first four days only (although Robin highly recommends the full six days.)

Many of us know Robin for her great little book "You Can Have Your Permaculture

And Eat It Too" while others know her for her fantastic manual on "Teaching Permaculture Creatively" Those who have done a course with her always come back recharged and ready to go.

We are all so busy doing the "Earth Care" part of permaculture that sometimes the "People Care" lags behind, especially the self-care. I'm looking forward to immersing myself in this course where we will fill up on all that good stuff that keeps us healthy and strong workers in our community and our environment.

Please see our website for online booking www.fairharvest.com.au or contact me at jodie@fairharvest.com.au

DYNAMIC GROUPS, DYNAMIC LEARNING

Facilitated by Robin Clayfield



What creates a dynamic group?
What supports an effective, fun and successful learning environment?
The jigsaw puzzle of groups learning and working together becomes an adventure in Creative Facilitation, Interactive Learning Methods, Personal Empowerment and Skills Development.



28th August to 2nd September
At FAIRHARVEST Margaret River WA

This 6 day Training is offered for Facilitators, Teachers, Trainers, Groups Leaders, Workshop Presenters, Change Agents and People in Creative, Healing and Sustainability Industries who would like more skills, tools and confidence to work and play with groups. It is underpinned by Robin's cutting edge learning methodology 'Dynamic Groups, Dynamic Learning' which she has developed through over 20 years of training teachers and group leaders.



COST: Sliding scale - Full Price \$995 (Gov't/Corpl/Business), Waged Individual \$845, Concession \$695
Cost includes all meals, morning teas, all day cuppas, handouts, resources and tuition.
Accommodation Extra - Camping included. See Fair Harvest website for other accommodation options
CONTACT: Jodie Lane - FAIRHARVEST Phone 08 9758 8319 jodie@fairharvest.com.au www.fairharvest.com.au
Robin Clayfield - EARTHCARE EDUCATION Phone 07 5494 4707 robin@earthcare.com.au www.dynamicgroups.com.au

Fair Harvest Permaculture Update

(it's been a busy few weeks.....)



Permablitz Margaret River donated 800 local native non-fire promoting plants to residents that lost their gardens in last years fires.



Peter Coppin came down and ran a one day course on pruning deciduous fruit trees.



We acquired a beautiful Tipi.

Seed savers expanded to include Swap Shuffle Share (produce exchange) and had a fruitful first gathering.



The floor started going into the new building.



grew loads of veg



Our interns arrived



and Tony Carruthers came down and ran another wicked Aquaponics course

Permaculture Design Course

8-19 October 2012

Zoe Kissane and Dr Ross Mars at Candlelight Farm

This Permaculture Design Course is designed to meet the needs of two different groups. Week One is in the second week of the school holidays and is suitable for teachers and others who wish to participate in a comprehensive introduction to permaculture techniques and principles. This week-long course is also for some CIV Permaculture students to undertake a 'crash' course in permaculture to help them with their studies.

The PDC is usually a 10-day course and is the universal course recognised by practitioners throughout the world. Week two, then, enables you to finish this course and so obtain the PDC Certificate.

There will be a number of tours in both weeks to go out and see permaculture in action. The design exercise (design and report for client) is only undertaken in week two.

Week One: Permaculture basics, ethics, principles, elements, zones and sectors. Strategies for fire. Guilds and stacking, Plant roles and placements, herbs, vegetables. Integrated pest management. Patterns and edge effects. Soils, soil amendments. Animals. Outline accredited training.

Practical: a couple of tours and practical sessions will be undertaken, such as cuttings and propagation, compost making.

Week two: Site assessment, designs and reports, surveying. Design steps. Maps and drawings. Rural permaculture, small acreage. Energy systems. Tree crops. Developing a concept plan. Aquaculture. Water harvesting, Keyline, WISALTS, swales. Waste management, Buildings and structures, Appropriate technology. Landscape and climate. LETS, ethical investment, ecovillages, Diploma, networking, resources.

Work on own designs, presentations. graduation.

Practical: A couple of tours and practical sessions will be undertaken, such as sheet mulched gardens, planting.

Costs: Course cost includes all handouts and notes, tuition, morning and afternoon teas (lunch your own), tours, practical exercises. Week One only \$550. Full course \$990. (Week two cannot be undertaken in its own right, as a distinct week).

Candlelight Farm

Candlelight Farm is the Permaculture business operation set up by Ross and Jennifer Mars for the teaching and promotion of permaculture in W.A. It has produced several permaculture books and two DVD's on energy efficient housing and the use of renewable energy for electricity supplies.

Facilitators

Your facilitator for this course will be Zoë Kissane who has been an experienced permaculture practitioner and teacher for many years. Guest presenter Ross Mars is a well-known educator, writer and course and workshop presenter. Ross is an active permaculture designer and consultant, and conducts Accredited Permaculture Training (CIII and CIV). Besides these activities he manages Water Installations Pty Ltd and Red Planet Plants, both in Mundaring.

☞ For more information visit www.cfpermaculture.com

Fremantle Permaculture presents...

Introduction to Permaculture

Two-day Workshop

Practical solutions to personal & global sustainability



- What is Permaculture? **Ethics and principles** in practice.
- Introduction to **systems thinking** and importance of **sustainable design**
- **Soil basics & composting**
- Intro to **permaculture plants** and **edible weeds** tour
- **Sector analysis, zoning & relative location for functional design**
- Permaculture in the **community** - creating **resilience** - grow your own projects!



Aug 18th & 19th, 9am - 4pm,
South Fremantle High School.

Cost: \$200 / Concession \$160
(morning/afternoon tea included)
Bookings at: www.trybookings.com/BOHG



with Brooke 'Sparkles' Murphy and Charlie Jones



Workshops at Lockridge Community Garden for 2012

Don't forget to add to your diaries the most regular permie gatherings in Perth, happening on the first Sunday each month.

Time: 10.30 am - 12 noon

Cost: \$5 p/p (proceeds fund the Gardens activities)

Where: Cnr Arbon Way and Diana Crescent, Lockridge

There's always great food and fresh coffee available, not to mention the awesome company! All welcome no RSVP required.

Here's a list of what's coming up for the rest of the year:

5 Aug - Tool Care and Maintenance with Ed and Tom

2 Sep - Growing Fruit Trees with Charles Otway

7 Oct - Fermented Foods with Bonnie Wykman

4 Nov - Propagation of Edible and Useful plants with Harry Wykman

2 Dec - Water Harvesting and Earthworks with Harry Wykman

☎ For more information visit <http://permaculturewest.org.au/news/food-growing-and-sustainable-living-workshops>

Earth Carers' course: Waste associated problems and possibilities

A FREE Earth Carer course on 'waste - associated problems and possibilities', organised by Mindarie Regional Council (MRC).

The course is five sessions over three weeks and includes tours and site visits, information sessions, domestic organic waste ideas, what others are doing and how to apply the message. All course materials, travel and meals are free. We just want people to know about 'waste'!

Participants find the course stimulating, depressing, interesting, overwhelming and inspiring - often all at the same time! The course offers assistance for people who want to apply their knowledge at home, workplace, school, or beyond.

MRC has responsibility for waste in seven council areas including the Cities of Joondalup, Perth, Stirling, Vincent and Wanneroo, and the Towns of Cambridge

and Victoria Park. While preference is given to participants from these areas, we will consider persons from outside these areas if places are available. The limit is 40 participants per course.

The next course is starting Wednesday, 22 August 2012.

☎ Contact Peg Davies pdavies@mrc.wa.gov.au 0422 941 492 for info or registration.