



Planning for food cities

By Jeff Thierfelder

Current thinking in urban planning is focused primarily on encouraging higher-density development along public transportation corridors. Pedestrian-oriented, mixed-use development is promoted to tempt people out of their cars. Planners encourage walking and cycling, hoping to reduce road congestion, air pollution, and obesity. This approach makes sense if

one understands the primary challenges facing cities to be increasing congestion, rising oil prices, and air pollution caused by a proliferation of private vehicle usage.

This paradigm supposes a future that extrapolates current trends without questioning how broader factors such as global finance, resource-scarcity,

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Image credit: DPZ

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

Welcome to the new-look *PermacultureWest e-News*.

Why the change?

Rachel Clifton is deep in new baby territory so I've stepped in to fill the void. In the future, I'll be sharing the Editor's job with Rachel to bring you the scoop on all things permaculture in WA.

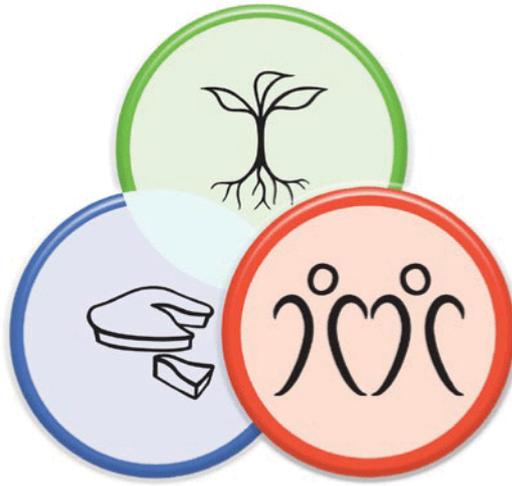
A software issue was the catalyst for the new design but it seemed a good opportunity to give e-News a facelift.

The graphics and colours are drawn from the season and will change with each edition accordingly.

You'll still find all the familiar features and regular contributors plus a few new bits and pieces to keep it interesting.

I'm new to permaculture, so please be kind to me if I miss something or get it wrong. Your feedback is welcome and, as always, we're keen to hear from everyone active in the permaculture space.

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



People care

If people's needs are met in compassionate and simple ways, the environment surrounding them will prosper.

The icon of the two people together, represents the need for companionship and collaborative efforts to affect change.

Care for people starts with ourselves, but expands to include our families, neighbours, local and wider communities. The challenge is to grow up through self-reliance and personal responsibility.

Self-reliance becomes more possible when we focus on non-material well-being, taking care of ourselves and others without producing or consuming unnecessary material resources. By accepting personal responsibility for our situation as far as possible, rather than blaming others, we empower ourselves. By recognising that the wisdom lies within the group, we can work with others to bring about the best outcomes for all involved.

The permaculture approach is to focus on the positives, the opportunities that exist rather than the obstacles, even in the most desperate situations.

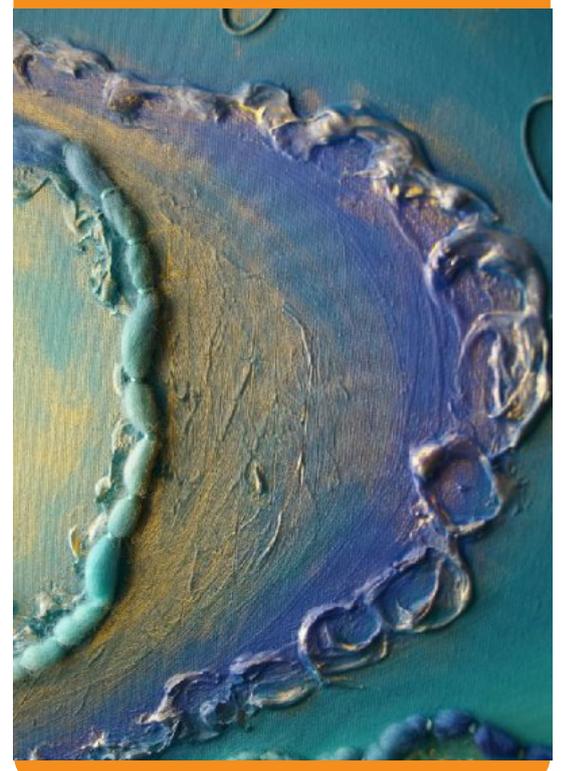
Text and images courtesy of <http://permacultureprinciples.com>

Djeran

The Noongar people of the south-west Coast of WA recognise six seasons. In Djeran, from April to May, the weather is cooler although rain is still infrequent with light winds from the south-west.

Djeran is the traditional time when bulbs and tubers were collected for food. Many native fruits begin to appear, drawing birds to the National Park. Families moved further inland along the Swan River where they continued to fish.

Depending on January rainfall, the Qualup Bells start to flower, as well as the Pincushion Hakea. Look out for flowering Stinkwood, Couch Honeypot and Cockie's Tongue.



and environmental degradation may unbalance our complex and mutually-reliant global economy to such an extent that it breaks down. If this system ceases to operate, it is very likely that the factors currently supporting the move toward rapid urbanisation will disappear, causing significant trend changes and a necessary re-evaluation of our urban planning response.

History of modern cities

With the advent of inexpensive oil based transportation (ships, trucks, trains, later air planes) in the early 20th century, modern cities began to emerge on the back of manufacturing and global trade in staple goods. The economist's dream of 'competitive advantage' based on local conditions became a global reality as transportation became a trivial cost of production. Large cities grew up around key global trading hubs, fuelled by jobs in a range of manufacturing and trade-related businesses. At the same time, prices for many goods began to fall just as the economists had predicted. This was great news for consumers, but it started to put increasing pressure on many traditional industries.

In many parts of the world, traditional farmers began to find that lower crop prices meant they either had to expand their operations or go under. Small family farms were simply not viable in a lowest-price based global economy. They expanded their farms by leasing or purchasing additional land (taking on debt) and by changing their approach to include artificial fertilisers, diesel-based equipment, and, in many cases, genetically modified seeds. The industrial model of farming was born.

This large-scale farming was capital-intensive. Bank finance began to play an important role in farming. Capital was largely substituted for labour, freeing up farm labour to work in the cities. This changing dynamic suited conditions in cities where factories and new trade-based industries needed workers. This sparked a massive rural-to-urban migration in most parts of the world that is still occurring, swelling the populations

of primary cities and draining the countryside of inhabitants.

Having to re-skill into new industries, the new inhabitants of trade-based cities inevitably landed in low-wage jobs. Their purchasing power for housing was minimal, relegating them to the least desirable locations, often on fringe rural land at the outer edge of the city. As these populations swelled, the result was urban sprawl in affluent countries and squatter settlements in poor countries. Because these locations were inevitably far away from the bulk of the jobs, transportation costs were very high and travel times long. This set of circumstances characterises the mono-centric city (Figure 1).

It is against this backdrop that urban planners developed their current 'transit-oriented development' (TOD) approach. This approach attempts to decentralise employment in a city by creating mixed-use nodes away from the central city. This distribution of jobs means workers have a better chance of being closer to work, reducing travel cost and time. The encouragement of high-density development around public transportation stops (bus and train) means more people live within walking distance of an alternative means of getting to work. Workers are no longer required to own a car, saving them time and money. This, in brief, characterises the poly-centric city (Figure 2).

Food is the missing link

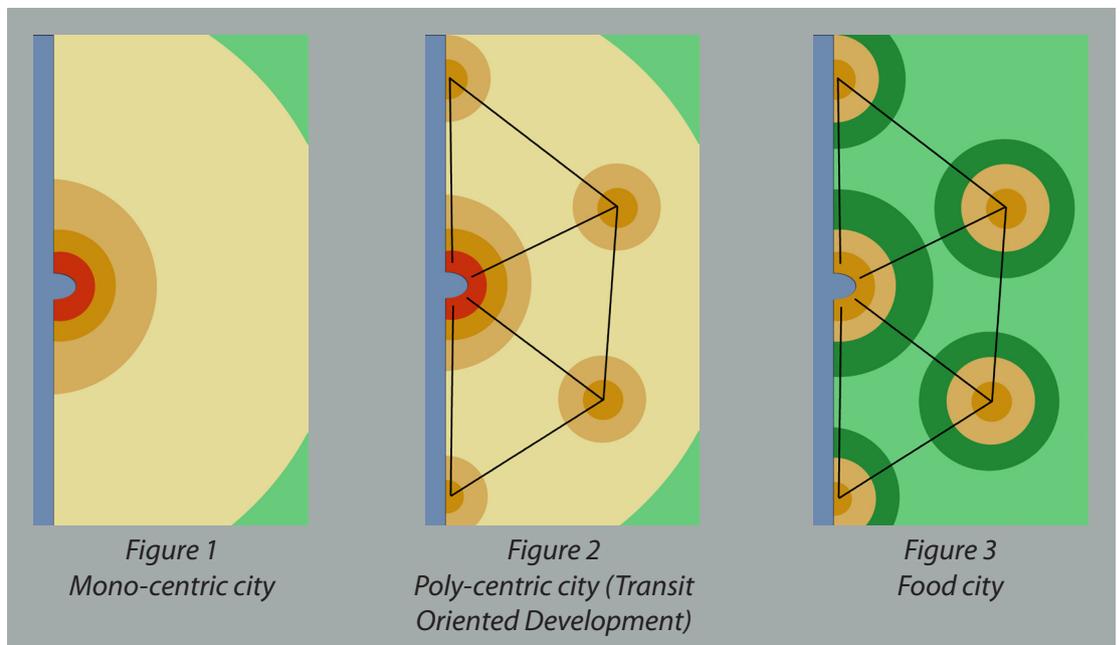
Given the current conditions (as commonly understood), the TOD urban planning response is completely rational. It reduces travel times and costs, reduces congestion on the road network, reduces air pollution (fewer emissions), and helps to slow the growth of the city's footprint (sprawl). This all works splendidly so long as the intricate global supply chains deliver goods to nearby locations for easy purchase on demand and at affordable prices.

In this scenario, food is assumed to come from 'somewhere else' beyond the frame of consideration of a particular city. Food is produced by the low-cost country and transported wherever it is

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The transit-oriented development approach attempts to decentralise employment in a city by creating mixed-use nodes away from the central city, which means workers have a better chance of being closer to work, reducing travel cost and time.

Food cities will be separated by greenbelts of productive farm land (Figure 3). This will allow small-scale, organic farming to flourish close to the locations where food is consumed, reducing transport costs for food and workers.



needed. In the context of abundant and inexpensive petroleum, transportation costs are incidental. Accordingly, the traditional link between cities and their productive agricultural hinterland has been ignored by urban planners for the last half-century or more.

It is unlikely that our complex economic system based on globalisation will remain intact in the face of the coming tumultuous global challenges. Peak oil, increasing military conflict, food shortages, and the recurring financial crises of our debt-based money system all loom ominously on the horizon. Local resilience will become the most effective coping mechanism to deal with the breakdown of this system. As a basic human need, the continued production of food will become a primary consideration.

The current method of industrial farming is not viable without significant inputs of cheap fossil fuels. Complex transportation systems that rely on mass quantities of food being moved quickly and cheaply across the world will no longer be available. Synthetic fertilisers based largely on natural gas will dwindle as supplies run out. Instead, farming will need to be transformed. It will need to add much more human labour, transition to sustainable and organic methods, and become much smaller in scale.

These changes will require that human settlements be designed within close

proximity to food production areas, re-establishing our historical connection with food growing and associated services. This creates a wonderful opportunity to examine the very nature of human settlements, and the appropriate patterns and relationships in this new context.

Food cities

There is a burgeoning movement in urban design variously called 'agrarian urbanism', 'agricultural urbanism', or 'food urbanism'. This school of thought holds that local organic agriculture must become the focus for our communities as it was historically. This extends far beyond simply growing food to include harvesting, processing, selling (farmers markets), festivals celebrating food, and consuming food. It also promotes a full program of farming waste reuse by composting or other means to close the resource loop. Food urbanism investigates a new settlement pattern that puts these vital activities at the centre of everyday life, while still allowing for a modern diverse lifestyle.

In this new pattern, these 'food cities' retain nodes of intense development linked to each other by mass transit. The main difference to the poly-centric city model is food cities will be separated by greenbelts of productive farm land (Figure 3). This will allow small-scale, organic farming to flourish close to the locations where food is consumed,

reducing transport costs for food and workers. It also allows for a number of opportunities to cycle waste streams between agricultural and development areas, closing the loop and retaining critical water, heat and nutrients in the system.

In this conception, agriculture again plays a central role in the life of the community, as it did traditionally. While not everyone will be farmers, many more will be involved in the growing, processing, or selling of food. The scale of production will vary depending on distance from the city centre. Large farms will sit between cities, though still close enough to allow access via low-energy transport modes such as walking and cycling. Closer to cities, smaller farmlets and large house blocks will contribute as they can to the food growing effort. Within cities, townhouses, terraces, and apartments can be designed to allow for the production of food; in the front garden, in a window box, or on the roof. Each can contribute in various ways, but all are connected by the overall theme of food production.

The benefits of food urbanism are that food production occurs close to consumers so it is fresh, organic, and takes little energy to reach the dining room table. It brings people together via shared endeavour, helping to form strong community bonds, and allows them to reconnect to a vital part of human culture: preparing and eating food. Most importantly, the 'food cities' settlement pattern is an urban planning approach that is proactive in addressing the coming, potentially catastrophic systemic changes in our global economy.

About the Author

Jeff is a qualified architect / urban designer with 14 years experience in private practice. He has a passion for design, sustainability, and fine grained urbanism. His interest in 'food urbanism' springs from a deep concern about the viability of our modern lifestyle and a sense of responsibility to ensure an abundant future for his two sons. More info can be found on his blog: foodurbanist.blogspot.com

Food facts: drivers of change

Information credit to ARUP; compiled by Jo Thierfelder.

Social

- For the average American, one meatless day per week reduce greenhouse gas emissions as much as switching from a typical sedan to an ultra-efficient hybrid.
- In England, for every farmer under the age of 35, there are ten over the age of 65. This ratio has more than doubled since 1993.

Technological

- Sandia National Laboratory in New Mexico uses hydroponic technology to grow livestock forage using 99% less water and 99.5% less land area than conventional methods.
- Seventeen million tonnes of food are being ploughed into Britain's landfill sites every year. If sold in shops, this discarded food would sell for around £18bn.
- Almost half of nitrogen used to grow food is synthetic, meaning nearly half the world's calories are made available by means of artificial fertiliser.

Economic

- Global trade in both food and agricultural products more than doubled in value between 2000 and 2007, reaching US\$913bn and US\$1.1 trillion respectively.
- Seventy-five percent of all human food is grain-based; three companies (Cargill, Archer Daniels Midland and Bunge) control about 90% of the global grain trade.

Environmental

- Farm animals consume the equivalent of at least an extra 2bn people. By 2050, livestock will be consuming more food than was consumed by the entire human population in 1970.
- Seventy-five percent of the genetic diversity of agricultural crops has been lost since 1900.
- Almost 80% of the world's fisheries are fully or over-exploited, depleted, or in a state of collapse. Worldwide about 90% of large predatory fish stocks are already gone.

Political

- Though the UN World Food Programme is struggling to feed 5.6M Darfur refugees, Sudan has agreed to let Egypt grow and export 2M tonnes of wheat within its borders.
- Though corn-based plastic is compostable, it will not degrade naturally in a landfill for 100 to 1000 years, roughly the same amount of time as conventional plastics.



Perfect pineapples in Perth

By Danielle Linder

When people think of good permaculture plants for Perth's Mediterranean climate, pineapples don't generally leap to mind. However, pineapples love heat and sun, will grow in marginal areas or in pots, and thrive on very little water.



Pineapple *Ananas comosus* is a tropical herbaceous perennial. It grows up to 1.5m tall and wide. The plant has a short, sturdy stem and narrow, waxy leaves 30-100cm long, often with sharp spines along the edges.

In its first year, the stem lengthens and thickens, bearing numerous leaves in close spirals. After about 12-20 months, the stem grows into a spike-like inflorescence up to 15cm long, holding more than 100 spirally-arranged flowers. Flower colours vary, depending on variety, from lavender

through light purple to red. The ovaries develop into berries which coalesce into a large, compact, multiple accessory fruit.

A pineapple plant flowers only once, when it is 18-24 months old, and produces one fruit before it dies. The fruit takes about six months to develop after flowering. Pollination, generally by bats or hummingbirds, is required for seed formation. But the presence of seeds negatively affects the quality of the fruit. Seeds, if present, are in the fleshy part of the fruit just below the rind. Vegetative reproduction is more common via slips, suckers, and pineapple tops.

Suckers, sometimes called 'pups', are little side shoots that are produced in the leaf axils (between the leaves) of the main stem. Some varieties will produce more suckers than others, some will start earlier and others later, but all produce at least a few suckers before they die. If

you leave the suckers in place you get a "ratoon crop". It is the least amount of work for the next crop but it has a few disadvantages. The plants start getting crowded, and compete for food, light and water. The next crop of fruit will be much smaller. Also, if you leave the suckers in place you only get a few suckers and the original pineapple plant dies. If you keep taking the suckers off, the plant will survive longer and continue growing more suckers. The timing is not critical. Even tiny plants can survive, although it is best to wait until they are about 20cm long. Plants grown from suckers will flower in about 18 months.

Slips are the tiny plantlets that grow at the base of the fruit on the fruit stalk. Not all pineapple varieties produce slips. Slips can be carefully snapped or pulled off. Do it as soon as they are big enough to handle (about 10 to 15cm) because slips develop at the expense of the fruit. Plants grown from slips can fruit within a year.

The easiest way to grow a pineapple is from a pineapple top. Cut the spiky top off a pineapple, and make sure you remove all the flesh and some of the small lower leaves. Make a small hole in the soil, add your pineapple top, firm the soil around the base to keep it straight, and water it in. It's that easy. Water the young plant regularly for the initial six to eight week establishment period, and provide a very dilute organic foliar fertiliser spray. After that, the pineapple plant will thrive with little water or attention. Plants grown from pineapple tops will take 20-24 months to flower, and then another six months or so before the fruit is ripe. The fruit is ready to pick when it starts to turn yellow. Leave it in a cool, dry place for a few days. Otherwise leave the fruit on the plant until it's fully ripe and yellow.

Pineapples need:

- **Water** – About 700 to 1000mm water annually, although they can survive and fruit with much less.
- **Sunlight** – In cooler climates,

pineapples need a lot of sun; in very hot climates, a bit of shade. In Perth they will thrive in full sun or part shade, but need protection from the westerly afternoon sun.

- **Soil** – Pineapples don't need much soil or high quality soil, but prefer it slightly acidic. They do not have a big root system, and get a lot of their nutrients through their leaves. Pineapples do need good drainage, thick mulch and good compost, which sits in the bottom leaves and feeds the plant as it breaks down.
- **Fertiliser** – Pineapples take up a lot of their nutrition through their leaves so feed the leaves not just the roots. Artificial and concentrated fertilisers will burn the leaves so use liquid fertilisers instead. Apply a diluted solution to the plant's leaves and the surrounding soil. The colour of the leaves will tell you how healthy it is. If they have a reddish, purple tinge then your pineapple is starving.
- **Space** – Pineapple plants can grow up to 1.5m tall and wide. They work well planted in clumps.

Why grow pineapples?

- Pineapples produce beautiful unusual flowers and so make an attractive focal point in a garden.
- Fresh, homegrown pineapples taste better than anything you can buy and they're free of nasty chemicals.
- Pineapple plants reproduce with very little effort on your part.
- Their spiky leaves make them an effective barrier for garden beds or other areas that need protection.
- The spiky leaves and shallow, fibrous roots of a dense planting of pineapple plants prevents soil and mulch from being washed away, and slows the movement of water down a slope. The lee side of this soil dam will build up rich loads of humus, which benefits the pineapples and other plants in the area.

📖 For more information visit www.tropicalpermaculture.com/growing-pineapples.html

Ruminations on Nicole Foss' dire predictions for the future

By Jo Thierfelder

I attended the day-long Ecoburbia conference to hear Nicole Foss give a presentation entitled *Making Sense of Economic Decline in an Age of Peak Oil*.

Nicole's main presentation only lasted about 1.5 hours during which time, it seemed, the audience didn't breathe for fear of missing a word. Her content was comprehensive and her delivery was masterful. She not only managed to explain the most complex set of issues in terms the audience could understand, we also gained an insight into how all of these issues and systems are inter-related and co-dependent.

It would be impossible to summarise her presentation so I won't even try. Suffice to say, it was a ominous outlook for the future and a sharp slap in the face of complacency. Nicole offered no solutions, no easy pill that would make it all go away, and I think some found her disastrous predictions too extreme to take seriously.

I didn't want to believe what I was hearing but I found it impossible to pick holes in her argument. Some of the key points I took away with me were:

- Rid yourself of debt.
- A sense of urgency regarding self-preparedness.
- There are things you can do to make yourself more resilient and you need to start now.
- Building community and relationships are the only investments guaranteed to pay dividends in the future.
- Global warming and climate change are long term issues, the fallout from peak oil is possibly years away, whereas the economic crisis is just around the corner.

Ecoburbia conference links

By Shani Graham

Many thanks to everyone who came to the Ecoburbia conference with Nicole Foss on Sunday, 11 March or the Town Hall talk on Friday, 24 February. I hope you found the sharing as thought-provoking as Tim and I did, and you are managing any distressing thoughts, and able to focus on what you can do to prepare yourself, your family and community.

📖 *A Century of Challenges* is available from The Automatic Earth website store at www.theautomaticearth.org where you can buy a DVD or download the talk.

📖 The Fremantle Town Hall Q&A session is available here www.youtube.com/watch?v=zs53-YQL7Ng.

Many thanks to Linda Blagg for the filming.

Nicole and Raul really enjoyed their time in Australia and there is talk of them returning. We will be sure to be in touch if this happens.

Plants for Carnaby's Black Cockatoos

By Vicki Boxel

Where to get the plants

APACE nursery
www.apacewa.org.au

Lullfitz
www.lullfitz.com.au

Zanthorrea nursery
www.zanthorrea.com

Men of the Trees
www.menofthetrees.com.au

Oakford native nursery
www.australiaplants.com.au

Plants for Carnaby's is a list devised by the Department of Environment and Conservation detailing species that the endangered Carnaby black cockatoos use as feeding, roosting and nesting resources. It includes native and exotic species.

The medium and high priority native plants listed here are fairly easy to get from nurseries around winter. Specialist native nurseries should have some of the more difficult to obtain species.

High priority food plants include *Banksia grandis*, *B littoralis*, *B prionotes*, *B speciosa*, *B prostrata* and *B undulata*. None of these plants are particularly tall or large trees. However, if you do have room for large Eucalypts, you could plant Tuarts (*Eucalyptus gomphocephala*) or Marri (*Corymbia calophylla*), which is an extremely important food species. After about 120 years of age they form hollows in which cockatoos can breed. For those with property in the Wheatbelt, the Salmon Gum (*Eucalyptus salmonophloia*) and Wandoo (*Eucalyptus wandoo*) are the trees of choice for future cockatoo habitat as these also form hollows after 100 years or so. *Banksia* and *Hakea* species provide good seed sources and mixed under storey.

Medium and high priority species for planting include:

- *Banksia ashbyi*
- *B coccinea*
- *B hookeriana*
- *B praemorsa* - cut leaf banksia
- *Callistris* sp
- *Corymbia ficifolia* - Red Flowered Gum
- *Eucalyptus caesia* - Silver Princess
- *E marinata* - Jarrah
- *E patens* - Blackbutt

- *E pleurocarpa* - Tallerack
- *E preissiana* - Bell-fruited Mallee
- *E todtiana* - Coastal Blackbutt or Prickly Bark
- *Grevillea bipinnatifida* - Fuschia Grevillea
- *G hookeriana*
- *Hakea cristata* - s\Snail Hakea
- *H laurina* - Pin-cushion Hakea
- *H lissocarpha* - Honeybush
- *H multilineata* - Grass leaf Hakea
- *H petiolaris* - Sea Urchin Hakea
- *H varia* - Variable-leaved Hakea
- *Jacksonia furcellata* - Grey Stinkwood
- *Xanthorrhoea preissii* - Grass Tree
- *Calothamnus quadrifidus* is also good for nectar and many *Callistemons* seem popular for similar reasons.

Macadamia nuts and almonds are not good food for cockatoos, especially when unripe, as it makes them sick. Sadly, the birds will eat these when they are very hungry, which is happening more often with the loss of habitat and food plants due to clearing of urban *Banksia* woodland.

It may be too late, as the Government is doing nothing to help save the last important areas for these birds. But if we do what we can and replant some of their food plants, at least we have tried to save another species from extinction.

☺ For more information visit Kaarakin Black cockatoo rehabilitation centre www.blackcockatoorecovery.com

Thanks to Harmony BCRC for her help with the list.



2012 Transition WA Conference a success

By Jesse Humphries

The first Transition WA Conference was held in Donnelly River on 23-25 February and attracted participants from all over Perth and the South West to discuss the theme of Sustainability in Western Australia.

It was a fantastic weekend of discussion, networking, planning and sharing with good food and great entertainment from the Dave Rastrik band and Tooboo West African drumming and dancing.

John Croft, a community development consultant, facilitated the conference and shared his skills and experience with participants for the weekend.

John was born in WA but has spent the last 10 years overseas working in the fields of community economic development. He is also co-founder of the Gaia Foundation and is currently working with a new cooperative called Living Earth Solutions, an Eco-Village Design Consultancy Cooperative. He is also running Dragon Dreaming workshops all over the world (Deep Ecology based) and working alongside founders of the Transition Initiatives movement overseas.

What is a Transition Initiative?

The Transition Initiatives concept is based on Permaculture principles and was founded by Rob Hopkins in England. The movement is now active all over the world and growing.

A transition initiative is a community-led process that assists towns, villages, cities and neighbourhoods to become stronger, happier, healthier and more resilient amidst changing times.

Communities can start up their own projects in areas of food, transport, energy, education, housing, waste, the arts, as small-scale local responses to the

global challenges of climate change, economic hardship and shrinking supplies of cheap energy. Together, these small-scale responses make up something much bigger, and help show the way forward for governments, business and the rest of us.

We used a self-management conference design approach throughout the weekend, which engages all participants in active learning by doing, and aims to capture the collective intelligence when groups of people come together. Various people volunteered their time to facilitate group discussions on a range of subjects.

Talks included:

- Global Transition Initiatives movement
- Deep Ecology
- Indigenous spirituality and culture
- Permablitz
- Australian Youth Climate Coalition (Re-Power)
- Seedsaving
- Make-it yourself dunnies
- Localised money
- Dragon Dreaming
- South West Power company
- Greens candidate, Giz Watson

We have now the network basis for a collaborative West Australian Transition Initiatives movement. An information site for WA contacts is underway.

☞ For more information on Transition Initiatives visit www.transitionnetwork.org

Alternatively, seek out your local transition group or visit the Denmark, Albany and Bunbury websites.

A transition initiative is a community-led process that assists towns, villages, cities and neighbourhoods to become stronger, happier, healthier and more resilient amidst changing times.

Cooking with compost

By Michele Kwok

Pasteurization occurs at 65 degrees C, which reduces many of the most dangerous pathogens in food, so one could easily treat the compost pile as a slow cooker.

Compost making is a skill most of us would like to refine. After attending my second workshop on composting at Lockridge Community Garden, it was time to put my knowledge of thermophilic composting to the test. A compost thermometer is a valuable aid in this procedure. I created a compost pile using materials gathered from known local sources such as grass clippings, rabbit bedding (wood shavings with manure and hay), horse manure, woodchip mulch and straw. Within 24 hours, the temperature rose to 70 degrees C! The fun began when I had to turn the pile once or twice a day, whenever the temperature rose above 65 degrees C.

Permaculturists have been known to use the heat source from compost to run hot showers. This is possible at the cooling stage when the temperature of the pile has dropped to 40-50 degrees. The energy generated at this temperature could also be used to heat and cook food. However, little information had been documented about this process. Most people would think a compost pile is smelly and ridden with vermin and bacteria. Understandably, the thought of cooking food inside it is probably unpalatable to most. However, pasteurization occurs at 65 degrees C, which reduces many of the most dangerous pathogens in food, so

one could easily treat the compost pile as a slow cooker.

I recently tested the theory by cooking fish in my compost pile. I marinated a fish (Banded Sweep) in lemon juice and wrapped it in turmeric leaves, then three layers of aluminium foil making sure to carefully seal each one ensuring no direct contact with the compost. I placed it next to the thermometer in the centre of the pile at 60 degrees C. The next morning, the temperature had risen to 72 degrees (nine hours later). I recovered the fish



parcel, unwrapped it and checked for edibility. The outer foil layer was dirty but the inner two layers were perfectly clean. The fish was well done but still moist. I ate it for breakfast and lunch! Since then I've baked two pumpkins using the same method.

Compost cooking works on cloudy days or at night when a solar oven will not function at all. There is virtually no infrastructure involved in producing a compost pile, unlike other high tech renewable energy appliances, which cost a lot to produce. The energy from the compost is utilised as a byproduct while converting waste into food for the soil. It's a win-win situation. If the day comes when the cost of energy becomes unaffordable, invest in a thermometer and cook on the compost pile!



Integrated mice and worm farm

By Alun Morgan

Our daughter has two pet mice. Their cage was cleaned out every week but the smell would return after only three days. My wife, Conny, was inspired by the rabbit / worm farm set-up at City Farm and suggested we try the same.

Using a small aquarium and a piece of an old security door we created an integrated mice and worm farm. It's been working well for about six months, so I thought the concept was worth sharing.

Firstly, we added about 8cm of worm compost from our worm farm. We then overlapped pieces of security screen to stop the mice digging into the worm bedding. The screen must have very small holes (less than 0.5cm) to stop the mice crawling through. Place the mice toys on top of the screen. We also tucked a piece of cardboard into each side to keep the worms in the dark.

It has developed over time but now needs very little attention. The execution could be prettier but the set-up is proving to be functional. The mice still need to be fed daily. However, leftover food is just left on the floor for the worms.

A small amount (1/4 cup) of water is thrown in daily for the worms. Even this

small worm enclosure is enough to keep pace with processing the fertilizer produced by the two mice.

Unpleasant smells only developed when we didn't keep an eye on the moisture level and either the worm section dried out or water was allowed to pool in the plastic mice toys. The bits of cardboard at the base are a bonus. Kids can remove them to sometimes catch a glimpse of the worms doing their work.

The only real problem we've had is getting any plant to survive in there. Low light, moist soil and very destructive mice have eaten or destroyed anything we've tried so far. Any suggestions would be appreciated. For now we're just regularly putting new things in. They've been through lavender, succulents, radish, bay, nasturtium, wheat, even kikuyu didn't last more than a couple of days.

Let me know if you are inspired or already trying something similar. We'd love to compare notes.

Even this small worm enclosure is enough to keep pace with processing the fertilizer produced by the two mice.

H LPG Creek Revegetation

By Elizabeth Nicholas

The Hills Local Permaculture Group met on Saturday, 17 March for its first monthly gathering for 2012.

In keeping with our 2012 intention to assist each other and other local groups to learn about and implement permaculture in our daily lives, we joined with others to support the regeneration of a tiny part of our local waterway ecosystems.

with the South West Aboriginal Land and Sea Council in relation to management of the system of underground and aboveground waterways of Wadjuk country, of which Nyaania Creek is a part. In carrying out our intention to contribute to the regeneration of this part of the creek, the group acknowledges the traditional and ongoing ownership of the Noongah



This Zone 5 work took place beside a tiny stretch of Nyaania Creek in John Morgan Reserve in Glen Forrest. This section of the creek meanders alongside the newly-approved site for the Glen Forrest Community Garden. Our taskforce included members of the local Friends of the Reserve group and the Glen Forrest Community Garden Group.

The group gathered in the shade of tall marri beside the creek to learn something of the place and the tasks of the morning. In contemporary times the creek is a winter waterway, and at this time of the year the dry creek bed is thick with paspalum, kikuyu, and watsonia along with multitudes of other opportunistic weeds.

To begin the morning the group heard from Val about ongoing conversations

people, and the essential knowledge of local Noongah Elders in managing restoration of local ecosystems*.

We were joined by local bush-regenerator-extraordinaire Kathy Woods. Kathy gave a short talk and demonstration of ways to assist in revitalising the creek's natural plant and animal systems. Rather than simply removing the weeds, creating more disturbance and inviting new crops of these same and other weeds to move in, we would plant small clumps of endemic rushes within weedscapes. Once established even a little, these local rushes such as juncus pallidus and juncus subsecundus will provide protection to endemic creatures such as frogs and bandicoots from foxes, cats, dogs and other hazards to creek systems.



The group divided into small teams to plant the rushes. We first 'scalped' small patches of paspalum and kikuyu on the edges of the creek, using small pickaxes or spades to remove roots and dig holes in the baked earth. Once an initial bucket of water had soaked into the hole, we planted the rushes with some water-holding granules, watered them well again, and covered with stone-and-stick mulches. We planted rushes in groups of two or three to optimise protection for small animals.

An important part of the morning was the careful bagging and removal of all scalped weeds and soil in order to minimise and prevent further spread. Weed seeds are likely to inhabit about 30 cm of the top soil profile.

The rushes will need extra water as we are probably still some way from substantial rain, so we will be keeping a close eye on the new plantings until the rains come.

We're looking forward to watching as the creek slowly transforms itself with the assistance of the local rushes and animals which will find their way back once protective habitats begin to be established.

Many thanks to all who came and to those who sent their good wishes for the day. A special thanks to Robyn from the Mundaring Garden Centre for supplying the juncus seedlings for planting.

🔗 For updates on the progress of this tiny patch of creek regeneration, check the HLPG blog at <http://hillslocalpermaculturegroup.blogspot.com.au>

**There was interest from many present to learn more about Noongah historical and ongoing stewardship and care of this part of Wadjuk country. If anyone is interested in participating in a local learning circle in relation to this, please contact elizabeth@earthsanctuary.com.au*



Hills Local Permaculture Group Update

This year the Hills Local Permaculture Group will be focusing on sharing and assisting each other with the small and practical details of implementing permaculture in our lives.

We will still be gathering on the morning of the 3rd Saturday of each month, sharing a cuppa and potluck morning tea or lunch, and we will also 'do' a small something, such as learning-while-pruning fruit trees, (at Trish's in May) or a 'mini-bee' in someone's garden or for/with another community group. One of these will be at the Silver Tree Steiner School, as a thank you for their very kind assistance in providing a venue for us to meet at for the last couple of years.

There will also be a couple of slightly larger-scale events. We will be teaming up with the wider PermacultureWest mob on the first Hill's Permablitz at Kristylee's in June.

We hope to build on the learning Permaculture West has been harvesting through permablitzes around Perth, to make the organisation of further mini and full-scale permablitzes in our local group easy and fun. Later in the year we plan to have a small surplus share fiesta; an opportunity to share produce, seeds and cuttings, skills, learning, inspiration, ideas, food, fun and time in the name of permaculturing the world starting with our local community/ies.

We will be focusing on sharing and assisting each other with the small and practical details of implementing permaculture in our lives.

Win tickets to **Garden Week**

PermacultureWest is pleased to offer TWO lucky e-News subscribers a free ticket to Garden Week (19-22 April 2012). To be in the running, tell us in 25 words or less:

1. What is your favourite section of e-News?
2. What would you like to see in future editions of e-News?
3. How can we improve e-News?

✉ Email your answers to info@permaculturewest.org.au. Entries will be judged by the Co-conveners. PermacultureWest will contact the winners to arrange receipt of the passes. Entries close 12 April at 5pm.



The poster features a stylized illustration of a garden scene with a house, chickens, and various plants. The text is arranged in a clear, hierarchical layout. At the top, 'NATIONAL' is in a black box, followed by 'PERMACULTURE DAY' in a large red box. The date 'MAY 6TH 2012' is in a dark green box. A list of activities is presented in a stack of red boxes. The location and time are in a dark green box at the bottom, with a website link below it.

NATIONAL
PERMACULTURE DAY
MAY 6TH 2012

OPEN GARDENS
PERMABLITZES
FARM VISITS
ECO-WORKSHOPS
FILMS, TALKS + MORE!

LOCKRIDGE COMMUNITY GARDEN
Corner Arbon Way and Diana Crescent, Lockridge
Starting 10:30am to 4:00pm

for more information visit: www.permaculturewest.org.au





Healthier Soil and Tastier Food with Paul Taylor

This workshop will teach you how to grow your soil and reduce your dependence on chemicals and fertilisers.

You will learn 'do it yourself' skills to produce healthier soil, and tastier food with better shelf life, while keeping more money in your pocket.

Paul is the managing director of Trust Nature Pty Ltd and has 30 years experience in natural farming, soil management and food production.

Farm Ready Grants may be available to primary producers and ABN holding landowners to cover 65% of the fees and \$500 of travel costs, please call to discuss.

Option of 2 or 3 Day Workshops

2 day \$350 21st and 22nd May 2012

Full 3 day \$500 21st, 22nd, 23rd May 2012,

Location: Bibra Lake, Perth.

Address: Cnr Gwilliam Drive and Progress Drive.

Time: 9am to 5pm each day.

Price includes, Workshop, Booklet, Lunch and am/pm teas.

Ticket sales : <http://permaculturewest.org.au/> or Phone

Charles: 0466 633 275

Tash : 0414 230 571

Note: Optional dates in Margaret River on 17th-19th of May.

PermacultureWest is a Not for Profit community association.



PermacultureWest

Permaculture Association of Western Australia



Introduction to Permaculture Workshop

Susan Hartley and Karen McKenzie would like to announce their first Introduction to Permaculture workshop for 2012.

Introduction to Permaculture is a practical hands-on approach to designing and building productive and beautiful gardens (and lives).

- Are you interested in growing nutritious, organic veggies?
- Do you need to know how to build fertile soil?
- Do you know how to select and care for chickens?
- Do you want to reduce your power and water bills?
- Do you want to connect with like-minded people and feel a greater sense of community?

You will learn how to use permaculture design principles to create abundant and efficient systems, meet great people and be inspired.

When?

Saturday, 12 May 2012 (9.00 am - 4.30pm) and Sunday, 13 May 2012 (9.15 am - 4.30pm)

Where?

The workshop is held in Sue's retro-fitted 50s house in Mount Claremont, complete with verge veggie garden, fruit forests, chooks, frog ponds, worms, outdoor bathroom and kitchen, grey water reuse, compost tea fermenter.

Sue's garden featured on 7 July edition of ABC's Gardening Australia and was open on 1-2 October as part of the Gardening Australia Open Garden Scheme.

Cost?

\$220, unwaged \$170. (Morning tea is included but please bring your own lunch.)

☎ For more information contact Sue on 0438 620 348, shartley@starwon.com.au, or Karen at kjmckenzie@amnet.net.au

About Susan

Having grown organic veggies and raised chooks in the Perth western suburbs for more than 30 years, Susan has gained a lot of hands-on experience. Susan completed her Permaculture Design Course with Josh Byrne, Martin Anda and David Holmgren at the Murdoch University Environmental Technology Centre in 1998. Courses in biodynamics, soil science and organic agriculture added to her knowledge.

A move to a 50s house in Mount Claremont was an opportunity to implement her knowledge on retrofitting an older home for energy and water efficiency. Susan initiated the Mount Claremont Farmers Market based on her experience of farmers' markets all over Australia as part of her research into sustainable, localised food distribution, fair to growers and consumers. Susan is a Past Convenor of PermacultureWest.

About Karen

Since completing a Permaculture Design Course (PDC) in 1998, Karen has been extensively researching, practising and teaching permaculture. Her focus has been on implementing permaculture at her passive solar home in Mullaloo. Karen worked for many years at the Murdoch University Environmental Technology Centre, coordinating 'Work for the Dole' programs and presenting permaculture training. She is a qualified teacher and works part time in primary schools, spreading the sustainability message. Karen is a Past Convenor of Permaculture West.

This workshop is kindly supported by PermacultureWest.

Hilton Harvest

Community Garden

4.30–9.30pm

Saturday 31st March

Twilight Fair & Earth Hour

Plastic-free Event

- A packed entertainment program - all by local performers
- Kids' activities from 4.30 til dark
- Scarecrow competition
- Variety of stalls – jams, home made soap, seedlings, second hand books and more
- Lots of food for sale, including burgers, sausage sizzle, crepes, cakes and drinks

Bring a candle and stay for Earth Hour... Starts at 8.30pm

Hilton Harvest Community Garden - Rennie Crescent South (Next to Hilton Pre-Primary)
www.hiltonharvest.weebly.com



Fair Harvest Permaculture Margaret River

For those of you who remember the heady days of the Giblett forest blockade you'll also remember Carters Rd Community, the safe house where activists came to rest, revive, play music, grow food and make more crazy lock on devices to take back to the forest.

With a constantly changing group of people Carters Rd Community (on the corner of my family's farm) thrived for the next 12 years and became a haven for activism, non-violence and permaculture. When we disbanded in 2006 the place slept for a few years, and when I looked around, I could only see work and old stuff. I left and went to work in a remote community.

In 2008 I came home and not long after I met my beautiful partner Do, an amazing gardener that had never heard of permaculture. Luckily, not long after, Claire invited me to the Permaculture Teachers Course and before I knew it we were growing again, teaching again, pulling down old fencing and loving the place back to life.

Last year we became official: Fair Harvest Permaculture. We haven't looked back. We've run courses, Permablitzs, started a local seed savers group, revamped the old barn and have a nearly finished new venue in the old shed.

Next month we run our first PDC and as I have such a great memory of doing mine in 1995 as a live-in, fully-immersed-yourself course, that's what we'll be doing. I've invited some of the best teachers in the South West - PB Foreman, Jeff Nugent, Claire Coleman, Bee Winfield, Mike Hulme, Pamela Forward, Lance Brandes and Jamie McCall to teach and have two great design projects to work on.

☺ There's a limited number of places left on the course so if you're keen contact us at www.fairharvest.com.au. An Introduction to Permaculture three-day course is also available.

We've got plenty coming up over the next year including workshops by Paul Taylor, Robin Clayfield and John Croft.

PERMASEED

Permaculture Guild for the South of Western Australia

By Georgina Warden

The newly anointed Permaculture Guild for the South West of Western Australia or PERMASEED had a successful first meeting on 18 March.

The Guild's aim is to establish a network of permaculture practitioners throughout the South West region who are interested in sharing information and supporting each other, as well as helping to spread permaculture more widely throughout our region.

We already have members in and aim to attract involvement from Bunbury,

Australind, Eaton, Binningup, Dardanup, Burekup, Boyanup, Donnybrook, Capel, Gelorup, and Stratham.

Nominations have been taken for guild positions but we welcome any interested participants and suggestions. The next meeting is scheduled for Wednesday, 18 April at 5.30pm - 7.00pm at Georgina Warden's house, 9 Cross Street Bunbury.

☎ For more information please contact Georgina Warden on 0427 456 699 or email: georginawarden@bigpond.com

share - educate - ethics - design





BioFertile Farms

This very popular hands-on workshop will redefine the role that biofertilisers and organic inputs can play on your property.

Join Eugenio Gras for a three-day workshop on how biofertilisers can drastically increase your on-farm fertility and save you tens of thousands of dollars a year on inputs.

This workshop is FarmReady approved.

BioFertile Farms Pemberton workshop

Over the last 20 years, pioneering scientists in Latin America have developed a range of 'farm-made' BioFertilizers to replace energy-intensive and expensive artificial fertilizers. These techniques have enabled farmers across Latin America access to the tools and knowledge needed to get themselves 'off the drip' of increasingly unaffordable artificial fertilizers. Now we're bringing this open-source knowledge to the rest of the world.

This workshop focuses on practical techniques of defining what your soil needs and enhancing it by applying biofertilisers for small, medium and larger-scale farming, grazing and forestry operations using everyday organic materials that are already present on the average farm.

When: 23 - 25 May

Where: Mountford Organic Winery, Pemberton

☞ For more information visit <http://regenag.com/web/upcoming-courses/details/16-biofertile-farms-pemberton>

Straw Bale Building Workshops

We run regular straw bale building workshops to teach everyone the skills and techniques of professional straw bale building. Dave will have you building like an expert in no time!

The best way to learn is by doing, so our workshops are a mix of theory and practice to ensure you get the most from your learning experience. You will learn tips and tricks from an industry master as Dave teaches you everything you need to know about straw bale construction from the ground up.

Weekend workshops 2012 schedule

Duration: Saturday and Sunday

Cost: Single enrolment \$345 per participant (\$300 with early-bird discount, offered for enrolments paid in full at least one week in advance.)

7 - 8 April - Boddington

5 - 6 May - Boddington

19 - 20 May - Bindoon

2 - 3 June - Bindoon

16 - 17 June - Bindoon

Maximum of 12 participants per workshop.

Five-day workshops

Duration: Monday to Friday

Cost: TBA

Host a workshop

If you are owner-building your own straw bale cottage, studio or dream home and would like to host a workshop to help with your build, Dave would like to hear from you.

☞ Enrol online now at www.strawtegit.com.au to avoid disappointment as our workshops book out very quickly.

WANTED:
permaculture-minded
house / pet
sitter

We have a suburban house in Hamersley and are seeking reliable house sitters for different times in the year, for various length stays.

We have two medium-large friendly dogs, two cats, chooks, rabbits and an relatively easy care permaculture garden set up.

If this is something you or someone you know may be interested in, please email me for more information and to discuss. *Tash*

☞ ndesign@arach.net.au



One of the most common comments that we get after people finish a Living Smart course is "I want to keep on meeting!"

After presenting a few courses in the local area and reading a lot about Transition Towns where there is a big focus on locals reskilling locals, Shani decided to set up a monthly Freo Living Smarties and Friends Group.

We have been meeting since May 2009 on the first Wednesday of each month from about 7pm until about 9pm. Generally between 20 and 50 people turn up each week. People bring along some food to share with a cuppa.

There is an underlying assumption that people understand the urgency of the twin issues of peak oil and climate change and are keen to work on continuously making their own lives and communities more sustainable – focussing on positive changes.

Every meeting we spend some time reflecting on what we have been doing to make our lives more sustainable, and sharing with others in small groups.

We then hear from a guest speaker who is a local person who has some skills or interest to share that expands upon some of the topics in Living Smart or show how the tips in Living Smart were applied in practice.

Topics we have covered so far have included measuring your home's power and water consumption, using carbon offsetting for your home and business, going plastic free – a monthly plastic free challenge, how to reduce your household waste to nothing making your own personal care products, Living



Smart in the home and work office, keeping chickens in the suburbs, bee keeping, home preserving, and alcohol making. Future plans include session to make a solar cooker, breadmaking, cheese makingand anything you might like to share.

You do not have to have done a course to join in but you might find it will motivate you to do so!

Freo Living Smarties & Friends

First WEDNESDAY of each month

Cup of tea from 6:30pm Meeting 7pm

Bring Snacks to share

Usually we meet at the Meeting Place in South Fremantle but please check the venue as it does vary!

MAKE YOUR OWN - 4 April

Whether you are worried about additives, wanting to save money or after a way to reduce your plastic use, come along to this session and learn how to make some of those personal care products we use every day – from toothpaste to deodorant, moisturisers to insect repellent. Join Mandy, Shani and others as they share their favourite recipes.

MAIA MAIA and the BOYA - 2 May

Maia Maia is a community-based greenhouse gas emissions reduction currency system in WA. The local currency based on these reductions is called a "boya", named after rock trading tokens used by the Nyungar people. Come and hear Sam Nelson talk about this system and how we can use it as an alternative currency in our community.

☞ For more information visit www.thepaintedfish.com.au