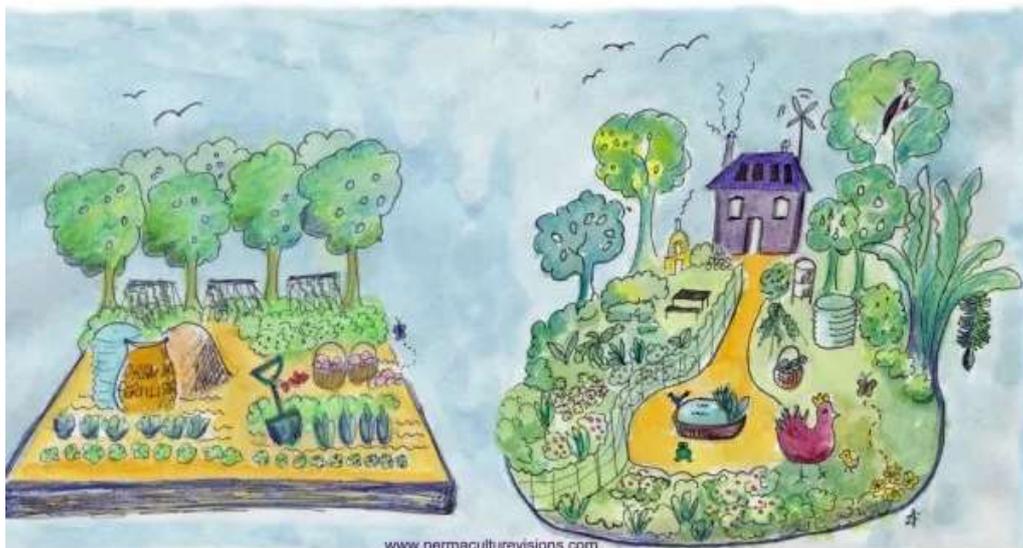


Introduction to a Permaculture Design

Why landscape when you can “Permascape”! Permaculture is often associated with being “organic” however this is only one small aspect of a permaculture designed environment.

The Difference Between Organic Gardening and Permaculture

- | | |
|--|--|
| <ul style="list-style-type: none"> * Higher yields per product but fewer products * Products ripen at same time * pest control closely monitored * mostly human labour | <ul style="list-style-type: none"> * Wider range of products including: food, fuel, recreation and habitat * Use of garden to nurture home (deflect wind, give shade, filter air) * Water catchment determines shape of garden * locally sourced reused resources * Integrated pest management * Sharing harvest with working animals. |
|--|--|



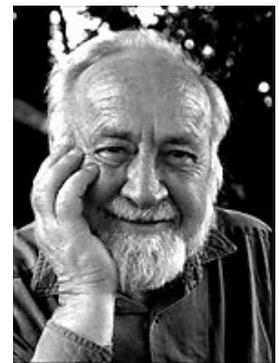
First, a history lesson ... the birth of permaculture

The word “permaculture” was born by the marrying of two words, **Permanent** and **Agriculture**. A young student called David Holmgren headed to Tasmania in the 1970’s to study and ended up developing the permaculture concept with Bill Mollison and so began, what ended up being for both, their lifelong work in doing and showing, leading by example style education.



David Holmgren

David and Bill worked together and produced introductory texts “Permaculture One” in 1978 and “Permaculture Two” in 1979. David left Tasmania to work on his permaculture theories, refining and testing them while Bill continued with his own work, producing a very in depth book aptly named: “Permaculture: A Designers Manual”



Bill Mollison 1928 - 2016

From there, the concept of permaculture gained momentum and popularity as people looked for something that encompassed many environmental, ecological, engineering and sustainable concepts that could be applied to every way of life. This eventually led to the creation of the 72 hour

The one lesson we've learned from history is that we have not learned any of history's lessons

Permaculture Design Course being established, which is now run throughout the world by independent facilitators, and precedes certified training in permaculture with Certificate III through to a Graduate Diploma in Permaculture available.

So what is Permaculture then?

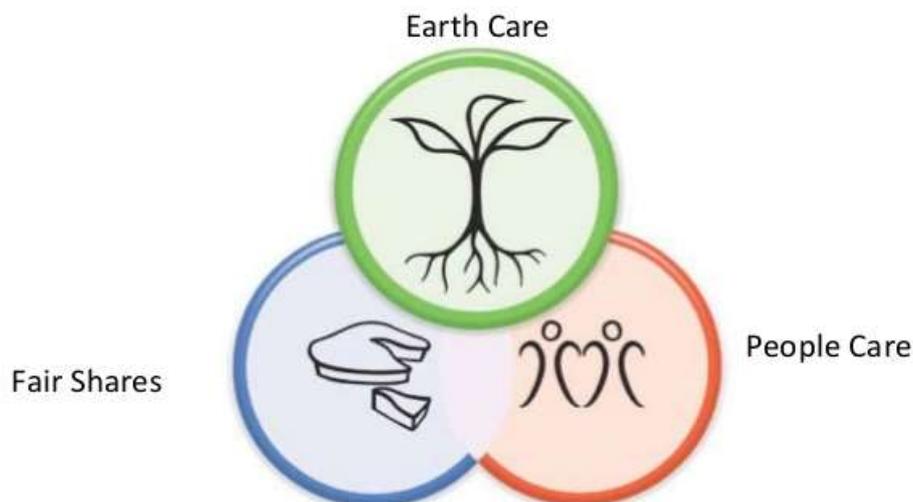
It is a design process that is gone through, where permaculture ethics and design principles are considered and implemented to provide a self-sustaining closed loop, supportive and regenerative environment - a "Whole Systems" way of designing. Permaculture uses organic gardening and farming practices but it goes beyond. It integrates the garden and home to create a lifestyle that impacts less on the environment.

It is about lowering our footprint on the earth and about creating an environment that co-operates with nature and with each other. It brings animals and plants, weather and environment, buildings and structures together in a way so that the way they interreact is energy efficient and beneficial to each other.

A permaculture designed property or garden is a lot more than just a garden. Intelligent permaculture encompasses an approach that uses sustainable energies and resources. It is energy-wise and collaborative to minimise the impact of a site on the surrounding environment.

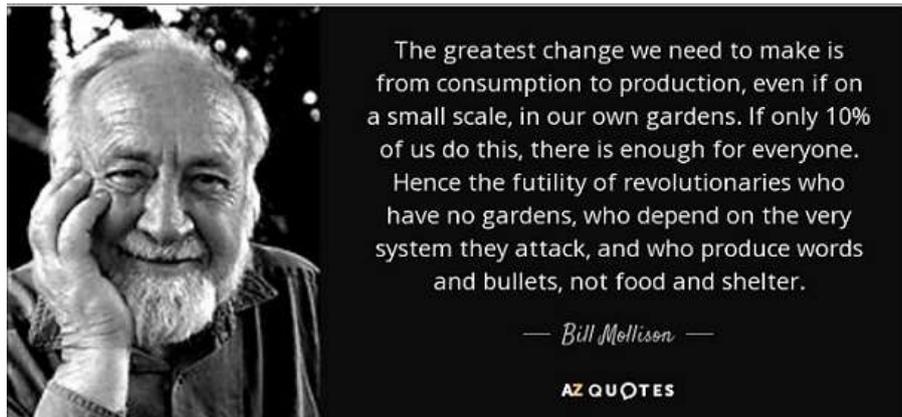
It is based firstly, on three ethics of *Earth Care, People Care & Fair Share*

Permaculture Ethics



Why is permaculture important for today and how does it fit in today's world?

We are at a stage where the world is out of balance and we are consuming our resources at an alarming rate. Thankfully more and more of us are becoming aware that there is a problem and undertaking the first step by acknowledging it. Thankfully for Google, we can easily start digging around (pun intended) and by doing our own research into what we can do to start making changes, we start to make changes and see the results spread like a ripple effect.



There's been a consistent momentum towards "growing your own" as people question where their food is coming from. Hopefully this will extend also to the material items we purchase and the industries we support, but if we can start with something tangible that creates a yield, most people will jump on board and keep that forward action going.

By taking responsibility for our choices and actions, the impact we can make either negatively or positively can influence our environment and community, but it has to start in the home first and for some people, the easiest place to start is with their garden or landscape. Inevitably the changes you make will impact on others and will reach out not unlike the roots of a plant. You may only see changes to what you're doing on the surface, but underneath all of that there's a whole system that is connected to you and you to it, both supporting each other.



Permaculture design also draws on the 12 principles of permaculture. We aren't going to go into them here in depth, as it would be like going into a rabbit warren, but so you can visualise it, the diagram on the next page depicts the permaculture "wheel" with the ethics as the hub and the design principles around the edges. You can download a copy of this straight from David Holmgren's website for free and without breaking any copyright at <https://permacultureprinciples.com/resources/free-downloads>

Permaculture Ethics

-  Care of the Earth
-  Care of People
-  Fair Share

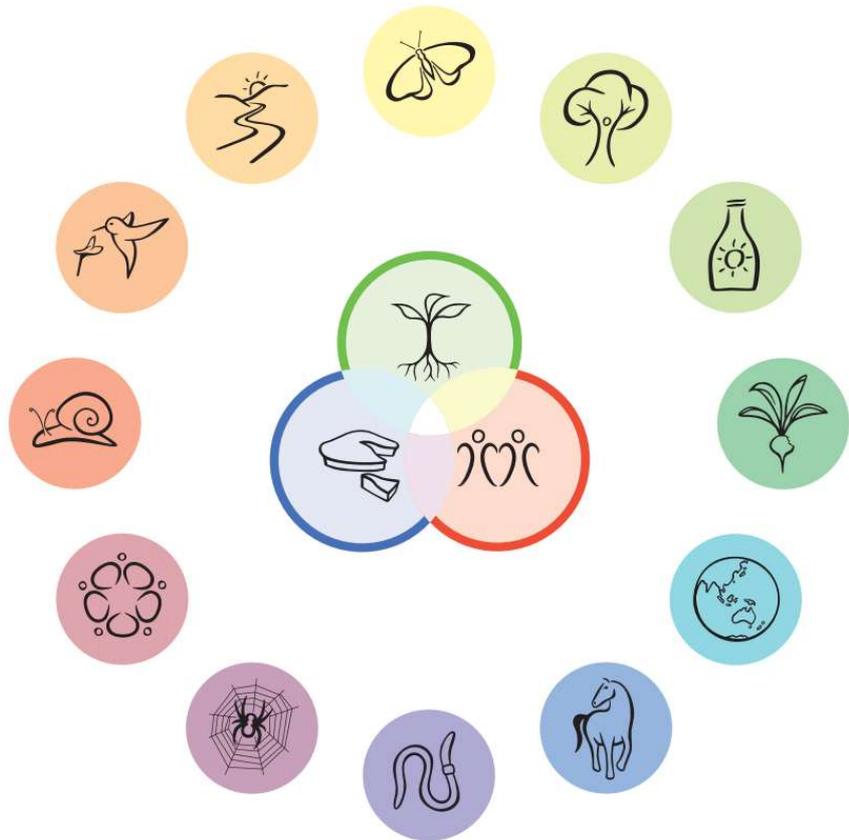
& Design Principles

-  1. Observe & interact
-  2. Catch & store energy
-  3. Obtain a yield
-  4. Apply self-regulation & accept feedback
-  5. Use & value renewable resources & services
-  6. Produce no waste
-  7. Design from patterns to details
-  8. Integrate rather than segregate
-  9. Use small & slow solutions
-  10. Use & value diversity
-  11. Use edges & value the marginal
-  12. Creatively use & respond to change

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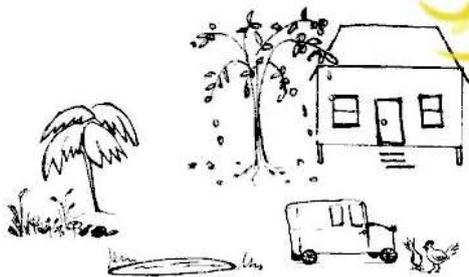


This work is licensed under the Creative Commons Attribution-NonCommercial-No Derivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, 171 Second Street, Suite 302, San Francisco, California, 94105, USA. The 'design principles' have been adapted from David Holmgren's book 'Permaculture: Principles & Pathways Beyond Sustainability', Permaculture Principles Poster 2.0.



So how do we bring some practical and easy design process' of permaculture into our own back yard and how does this save us time and money?

It's not WHAT you have. It's HOW you use it!



BEFORE PERMACULTURE DESIGN THINKING

Dysfunctional garden,
the truck pollutes pond and danger to hens
Hens hot in the full sun
Pond evaporating in sun
The herb and vegetables shaded and neglected
The house has rotten fruit on roof and paths
House is hot.



AFTER PERMACULTURE DESIGN THINKING

Functional design:
Truck and house in shade
Hens can shelter under tree and eat falling fruit
Pond reflects morning light into house
The herb and vegetable patch near house.
House shaded by deciduous tree.

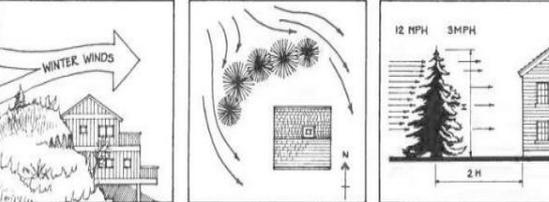
For ease of use, let's start with our garden. How many of us actually take the time to plan out our gardens based on;

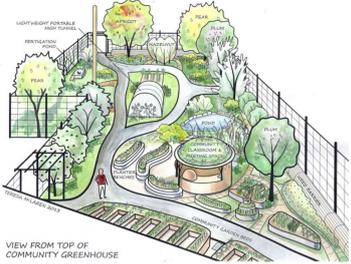
- How can we use natural patterns to our benefit? The pattern (routine) in which we move around our property on a daily basis, the pattern in which the sun, wind or water moves across our landscape
- Ease and practicality of access
- Time we have available daily, weekly, monthly etc...
- Resources we have available eg: tools, equipment, people (children!) buildings, local business or access to free raw materials
- What can we reuse and recycle to create what we are after
- How can we make this space more efficient and supportive
- Etc...

We can then start the initial design process thinking about four things;

- Sector Analysis
- Slope
- Zones
- Elements

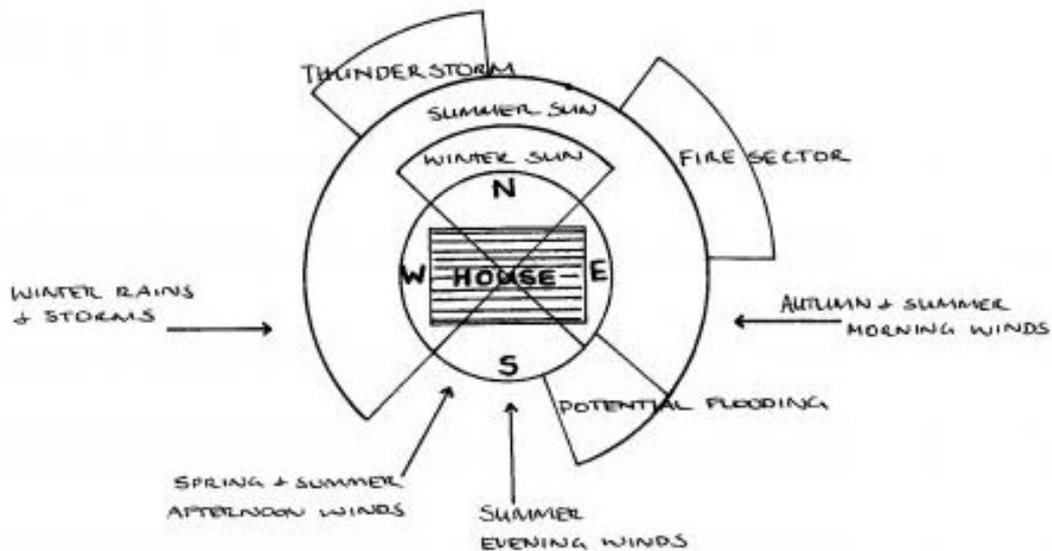
Permaculture Sectors – is identifying a path of energy coming into or out of our property.

<p>Sun Energy</p>	<p>where is this coming from at ALL different times of the year and what blocks it? What area's of my home will store this heat and how will that affect my design?</p>	
<p>Wind Energy</p>	<p>What direction does this hit what part of my property. How does this differ during the months and times of the year How does the structures I have around me influence this? Remember this equation $H \times 10 = D$ where H is height of the windbreak and D = distance that the wind is deflected.</p>	
<p>Water Energy</p>	<p>what direction do those winter storms come in from and when do I get it? How does the water move across my landscape features and buildings/structures?</p>	

<p>Fire Energy</p>	<p>From what direction am I most vulnerable?</p>	
<p>Access</p>	<p>How are you going to access your property? How do the other sectors impact on this? How will these pathways carry energy? Yours, water, radiant heat etc...</p>	
<p>Pollution</p>	<p>visual, chemical and noise</p>	

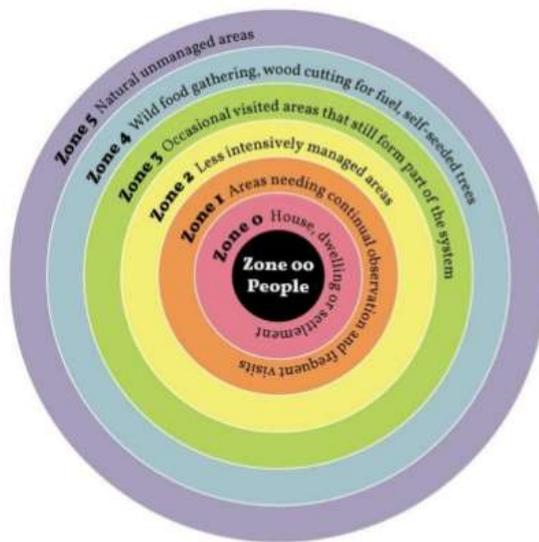
What does a Sector Analysis (Plan) actually look like in real life?

Examples below of basic sector plans – one including zones and one without. It is not taking into account slope (contours) on the property or existing vegetation but is a good start.



Slope (contours)– how does my slope affect the sectors? For example, if you're on a hill with buildings around you, this will affect how the wind moves through your property. The infrastructure in place on this hill will also influence how this slope deal's with water moving across it, what that bring's with it ie: soil movement, and how can I work with that to my advantage?

Zones: energy efficient planning! These are conceptual boundaries based on energy and frequency required or needed within each boundary. They can overlap, be funny shapes and not be in order extending outwards like a ripple. An easy diagram to start getting your head around this concept:



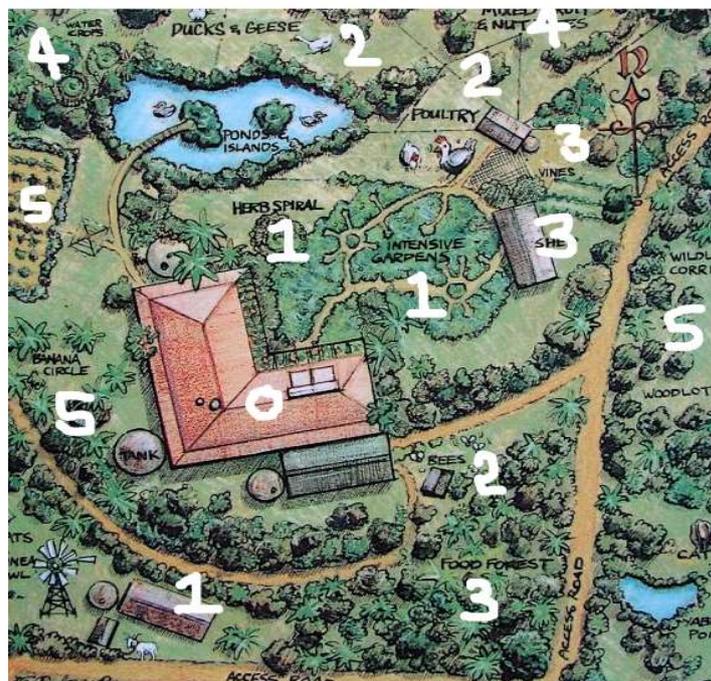
Zone Planning

Placing elements according to how much we use them or how often we need to service them.

There's even an equation for working out the basic parameters of your zones.

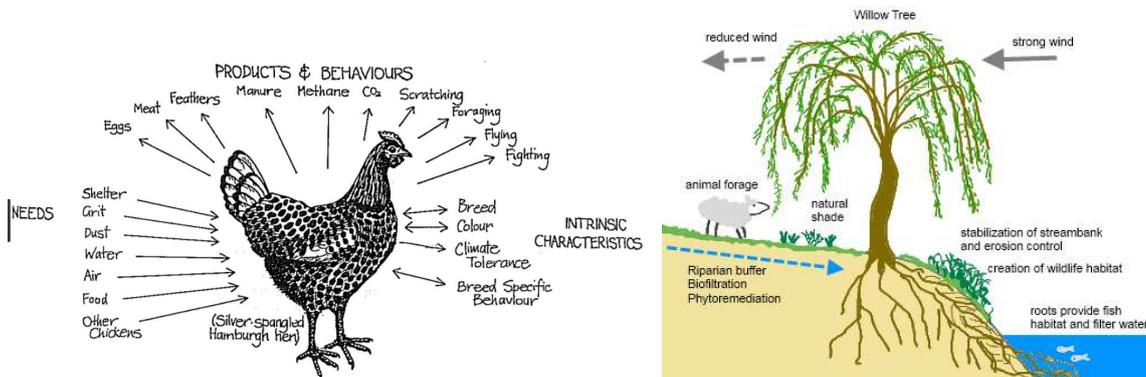
Zone #	Basic Parameters: Time (T) = frequency (f) * duration (d)
0	Nexus of human activity, typically a dwelling
1	As close to 0 as possible, T input is characterized by high f and d
2	The next distance out, T input is characterized by moderate f and d
3	Distance from 0 is major factor, though T input can vary. E.g.: high f but low d
4	Distance from 0 may be a major factor. E.g.: very low f but high d
5	A wild zone where human intervention is ideally zero. T input varies widely.

What does this look like in real life, because let's face it – housing lots generally aren't round and in concentric rings. On a large property it could look like this!



Elements

What the heck is an element? This is a word you may hear bandied around the permaculture traps. Put simply, an element is anything that is going to be a part of your permaculture design such as a shed, carport, house, trellis, chicken, garden bed, swale, water tank, shelter belt, wildlife corridor, fire access track etc... and every element has to be considered as to how it interreacts with every other element.



So where do you start?

First make the decision to reduce waste and make the step to becoming more sustainable with your thinking, what you do, where you direct your energy and take responsibility for the choices you make.

A really easy thing to implement is to recycle your organic waste. While you're thinking about where to put your zones, considering the sectors and the general lay of your land is to start *composting!*

Organic waste serves no purpose to you if it leaves your property. You're paying someone else (the council) to use fuel in their rubbish truck to take it to a tip, where more energy is used to dig it into landfill. Keep it on your property and use it to your advantage!

There are plenty of ways to compost without a compost tumbler, 3 bay hot compost system or a large bulky container. Bokashi, lasagne beds, worm farms, worm tunnels, chickens do the research and you'll discover a whole new world of composting out there.

Second - start looking at your property and think about a sector analysis. This is an overall view of the sectors, on your entire property. Remember that chart above? Sun, Wind, Water etc.... how do all these energies influence you?

Third – zones. What area's are best suited to where based on those sectors? What area's in your design will you visit the most, forget the most but should visit, need access to regularly etc...

Fourth – slope. How will this affect your zones and your sectors? For example, putting an element at the top of a hill that you have to visit daily with a heavy bucket, is something that will take a lot of energy. Can this be placed somewhere else? How will the slope affect the water movement? Will slope impact on how you landscape for a garden?

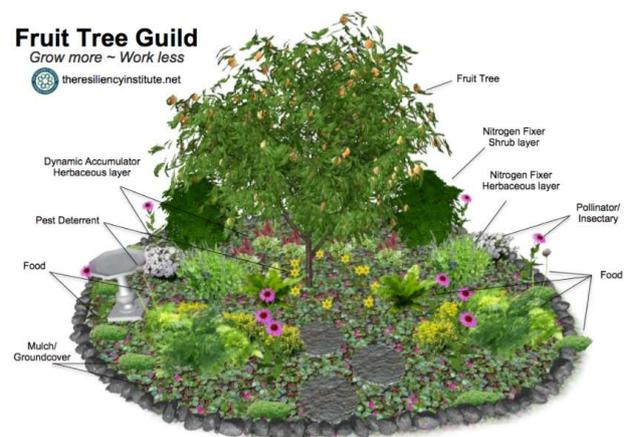
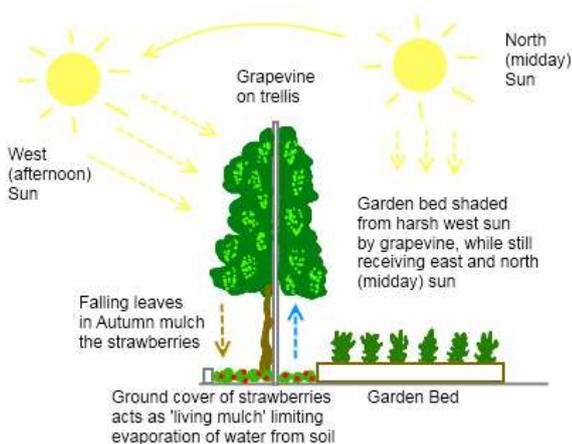
Remember that a permaculture design is a functional design. It is:

1. Sustainable – it provides for its own needs.
2. Has surplus yield – for on-going fertility. *(Should create a regenerative capacity)*

The guiding principles to remember is that:

1. Everything is connected to everything else.
2. Every system function is supported by many elements.
3. Every element serves many functions.

Consider perhaps the VERY first place to start is a simple vege garden bed. Use the thought process above, sector, zones etc.. as to where you plant what, how they all work together and in what way you can harness the most out of the energy that is going in and coming out of that space. The illustration below is a great example!



Permaculture is about observation, regeneration, sustainability and creating diversity. It is a continual journey of learning and one I hope you all embark on wholeheartedly! Congratulations to you for taking the first step.

“Adopting permaculture in your garden could be the first step towards limiting your personal consumption and planning your life to become more creative as time goes by” Graham Bell, “The Permaculture Garden”