

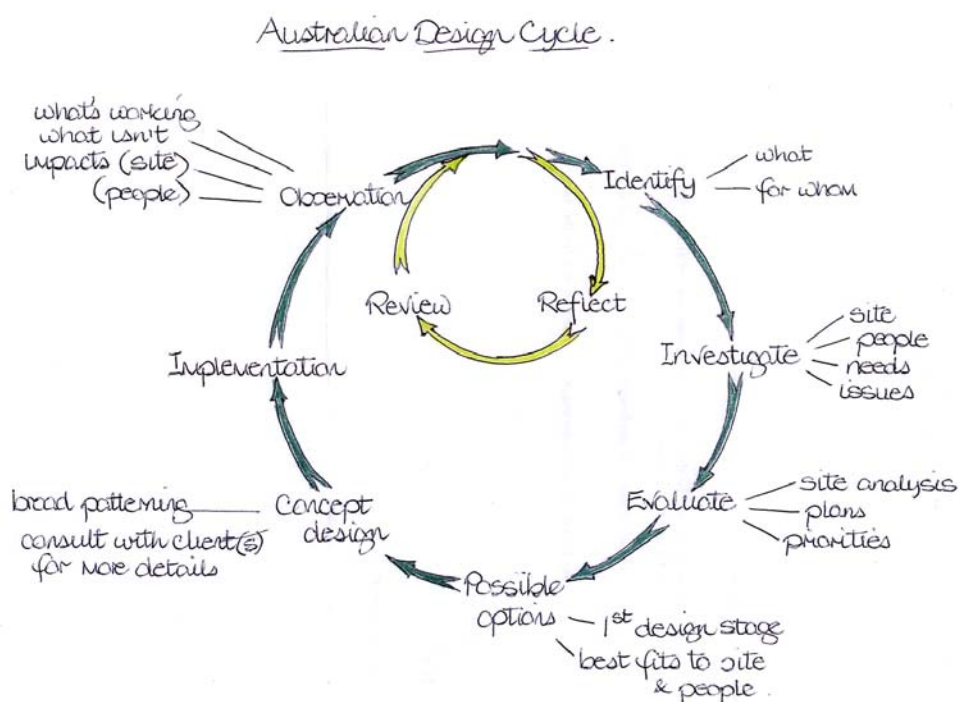
School Garden



Hooke Court School in Dorset is a private boarding school in a small village which also runs field studies courses. These are aimed primarily at getting inner-city children out into the countryside & to make them aware of how important it is to conserve our natural environment. To that end they focus primarily on Environmental studies, but they also teach a lot about History in a very interactive way. I found myself being invited to design an area of the school as a History & Permaculture Garden.

The Design Process

For this design I am using an Australian design process, illustrated below. First I identify what the design is & for whom. Then I investigate the site, people, needs & issues. Next I evaluate the information (site analysis, plans & priorities) & produce a draft design outlining possible options. I consult with the client & then produce a concept design for the site. From here I would go on & implement the design & then observe what is & isn't working. This I could reflect upon & then review the design, producing a better version. This design however didn't quite reach the implementation stage (at least not yet), so I only follow the process as far as producing my first concept design.

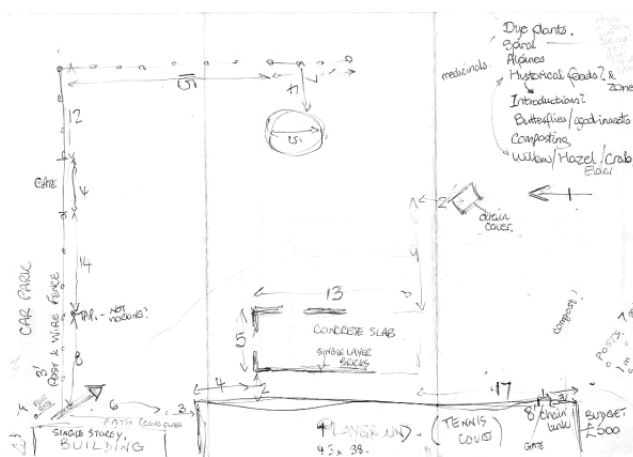


Identify

What: The design is for an educational Permaculture & History demonstration garden to support existing teaching at the school & provide new teaching opportunities. **For whom:** The clients are the school; the tutors & the pupils - both boarding & field studies (indirectly). My client questionnaire was targeted at two of the school staff who were involved in teaching the current interactive sessions.

Investigate

Site: The first job for me, having accepted the offer to design a garden in the school grounds was to have a look at the site. My survey began with taking some photos & then pacing out the distances between the fixed elements already there. As you see from this first photo, taken looking through the entrance gate on the north side, it was basically just a flat well mown area, therefore I haven't concerned myself with contours in my design. The area was bounded on three sides by fencing & open to the south, although there was a line of fence posts across the south west corner.



1. Site size:

Approx 50 m x 40m, essentially rectangular.

2. Physical challenges:

Concrete slab foundation from previous building.

3. On site resources:

- * Grass cuttings.
- * Food waste.
- * Plants for propagating (inc. water plants).
- * Lot of soil from digging swimming pool.
- * Paper & cardboard waste.
- * Manure (from nearby stables).
- * Concrete foundation for a building?

4. Water catchment:

Moat available nearby, but also sports hall & proposed building's roof run-offs are available to be harvested.

5. Soil:

Compacted & depleted over a long period of mowing as a playing field & having the grass cuttings taken away.

6. Aspect:

Generally good; open to the east, hedging to the south, buildings & tennis court to the west, tall trees to north on far side of car park.

7. Available utilities :

Water tap by car park fence. Electricity in sports hall. Good access for materials via car park.

People: Having made a base plan of the area I arranged a meeting with two of the tutors in order to go through my client questionnaire. We held the meeting next to the wattle & daub building adjacent to the south west corner of the site. I learned that this building was a prime example of the interactive way in which the school taught it's pupils.

Their specialist areas were in history & environmental studies. As well as having a fairly small number of boarders, the school took a lot of children from inner city schools in order to introduce them to the importance of looking after our natural environment & to give them a taste of how people really used to live.

1. Number of people on site and relationships:

Varies, but classes of up to 30 children & one or two tutors may be using the garden at a time.

2. Physical challenges:

Disabled access required.

3. Occupations and skills:

Gardener employed on site, though likely to be unfamiliar with some of the plants' requirements. Also tutors with skills in History (keen amateur gardener) & Environmental sciences.

4. Ages:

Children are all ages from 4 to 13 years old boarding & older on field studies courses.

5. Resources:

Volunteers (Parents, Tutors, Pupils?). Skills (mentioned above).

6. Addresses of local like minded people:

Kingcombe Meadows - Dorset Wildlife Trust,
Dorset Trust for Nature Conservation.

Needs:

The needs that came up as part of our initial client interview were later added to as a result of my suggestions, particularly in relation to the Permaculture garden. I was also contacted by one of the History tutors with specific needs in that area too. The general needs were:



- * History gardens (food, dyes, materials etc).
- * Wildlife habitats.
- * Permaculture demonstration garden.
- * An extra outdoor element to interactive teaching.
- * To teach other observation skills.
- * Disabled access.
- * Classroom materials.
- * Low cost.
- * Easy maintenance.
- * Maintain clear access to both gateways in fence

Issues: Financial situation: Only £500 was initially made available as budget for the project, though this was later increased to £1000. This is still a very small amount though & raising more money is also going to be necessary for the project to be funded completely.

Disabled access: In order to accommodate wheelchairs, the paths will need to be wider than usual, reducing growing space & using more materials (costing more). The surface will have to be hard enough to cope with thin wheels & still drain safely (i.e. not get icy in Winter).

Deer & rabbits: The wild deer & rabbits are potentially a problem in terms of the plants & trees, so these will need protection. The site is on the perimeter of the main buildings & is quite vulnerable to visiting browsers there.

Building: The old concrete foundation may become home to a shed in the near future, though it is not clear exactly what form this will take & if a simple set of pathways will be sufficient access to it.

Researching Historical Plants: The tutor that I was liaising with talked to the other tutors involved & then wrote to me again with further details of the needs of the history tutors. Having been informed about this, I then had more research to do before I could start on the next stage of the process. Included with the letter shown here was a list of plant species suitable for a Roman plot, but I needed to find out more about which plants were used during each of the proposed periods in history in order to know what to include in the different gardens. At first I looked up the dates in which different plants were introduced into this country & by whom. Many plants in more recent centuries were introduced for ornamental reasons, but going back a bit further, the reasons were more often practical ones. Invading armies brought plants with them to provide them with familiar food & medicines for instance. I then looked at history books devoted to the periods in question, but a surprisingly little amount of information was to be found there, even in chapters about daily living. Considering that food is essential to our survival, I was amazed at how hard it was to find out about people's diets during the periods in question. Eventually I was able to come up with plant lists for the different periods & I'd these to use as a basis for my designs, but it wasn't going to be as simple as including all the plants on my lists.

According to my research the Romans introduced Ground Elder as it was a favourite vegetable of theirs, but would it really be sensible to deliberately plant this in a small area & expect it to stay there? No doubt one of the reasons that they chose it was that it required no looking after to keep providing them with food; a good enough one to justify the choice of many other equally vigorous species, but an invasive plant in a small garden is not a situation that would be easy to maintain. This is a situation where maintaining the complete authenticity of a garden could create repercussions throughout the overall setup. Obviously, each period also had different types of gardens, there have always been the wealthy & the poor & their gardens would have been very different. Therefore, the gardens were going to have to be created to fit in with the sessions that the tutors would be teaching. There was also a request for three areas to be put aside to represent different more recent agricultural practices; hay meadow, grazed land & monocultured cereals. All of these may have to be in some way shielded from each other as wild flowers could easily set seed from one area to another through the fencing.

Evaluate

Site analysis:

The site is more or less a 'clean slate', with just the concrete foundation & a single drain cover roughly in the middle of the site to work around. The access is very good & there are two main flows through the site. One runs from the pedestrian gateway by the sports hall across to the wattle & daub building & the other is for vehicles occasionally entering from the car park & heading for the main playing field area to the east.

The gates in the tennis court fence are rarely used, but should still be made accessible. Placing a multi-purpose building on the concrete foundation provides a good solution to what is otherwise a problem. This becomes an essentially 'fixed' element because of the extra work involved in placing a building elsewhere, so it becomes a good place around which to design the garden. It makes most sense to me to keep the History gardens at one end & the Permaculture garden at the other. As they are going to be more work to maintain, the History gardens shouldn't be too big, preferably collectively no bigger than the Permaculture garden which has so many more potential learning opportunities to offer. It makes most sense I feel to put the History gardens at the same end as the Wattle & Daub building to provide that continuity & to arrange them around a central element. The Permaculture gardens will in time have a few canopy trees & so these should go at the north end of the site where they will shade neither the rest of the Permaculture or the History gardens.

There is currently very little in the way of vertical surfaces to utilise. The tennis court fence could become a trellis for climbing plants. The sports hall wall has an easterly aspect, but could still be a good growing space. The other fencing is only a few feet high, but again could provide a little plant support. Disabled access isn't a problem in terms of gradients, though to accommodate wheelchairs, the paths will have to be wide & firm, ruling out a lot of recyclable materials straight away. I investigated this further & obtained a list of suitable materials, though none of them feel very appropriate for our site.

Concrete which seems to be the most recommended surface feels particularly out of place, but this may be the only feasible option if all others are excluded.

Zones & sectors:

As the garden is being created more for educational purposes than for productive ones, I am designing it to demonstrate the principle of zones, by the closer than normal placement of elements in a small space. The building is considered to be the home (zone 0) & the zones travelling out from there. Zone 1 will be elongated along the line of the pathway through the site. Zone 5 will be 'simulated' by the complete fencing off of a corner at the edge of the site. When the hedge is established it will also act as a wildlife corridor around the site. The site itself, while not being in a zone 1 situation exactly in relation to the school buildings (being outside the moat), is still on a regularly travelled route & so will receive plenty of attention. The sectors are very favourable. North winds are buffered by tall trees just beyond the car park. The rest of the site is very open & receives a lot of direct sunshine. The addition of a building on the site would provide a bit more variety, including a shady area, which is something that is almost entirely absent at present. Shade under trees in the future could also be utilised to enable the growing of more shade-loving species.

Principles:

Some examples of how I'm applying permaculture principles in the garden:

Minimum effort for maximum effect: Collecting the water run-off from the sports hall roof. Using existing posts as the basis for a fence. Growing climbers up the tennis court fence. All fences collect wind blown fertility (leaves etc.) for plants below them. Creating beds using mulching methods. Creating a 'wilderness' area by simply fencing off the one open side.

Multiple supply: Providing information on signs around the garden, in hand-outs & from the tutors themselves. Watering the garden comes from the rain directly & indirectly (off roofs & into rain butts), the moat & from a standpipe by the fence. Permaculture demonstration plants are also being grown in History gardens where appropriate. Soft fruit grows together (where it can be netted) & also as part of the orchard guild; these could produce early & late crops & growth can be compared between the two.

Multiple yield: Choosing useful permaculture plants from the list for growing in the cottage garden; they can be both 'historical' & useful. Climbing plants hide tennis court fence & provide scent/fruit/shelter etc. Children help maintain garden & learn from it too. Composting area provides education, uses waste & feeds the soil. Plants provide food &/or useful materials & learning opportunities. Eco-building provides classroom area, exhibition space & an example of eco-construction. Trees & hedges provide shelter, food, habitats, biomass, vertical growing space etc.

The problem is the solution: Using waste resources from local businesses, local stables, the School etc for mulching. Using waste containers from homes, the School etc for growing plants in. Utilising the concrete foundation for a new building. Utilising the soil heap a short distance away (from the construction of the swimming pool) in the garden beds. Using bricks from foundation to make a pathway to the building. Hiding the unsightly chainlink by growing productive climbing plants up it.

Relative location: The History gardens are placed next to the wattle & daub building & around a central element. The building is placed near the centre of the site. Demonstration of zoning in the garden. Ponds placed in beds, where frogs can hop out & eat slugs for instance & the body of water stores heat near plants for slow release.

Stacking: The temporal stacking of plants (choosing seasonal varieties of fruits & planting in different microclimates). The vertical stacking of plants & trees (utilising all the seven vertical layers of growing space).

Plans:

Having analysed the options that were available to me in this design, I clarified the plans for the garden:

- * To create History gardens to assist with teaching interactively.
- * To erect a building to act as a classroom & display area.
- * To create a garden to teach Permaculture principles.
- * To provide sensory exercises for students to expand awareness.
- * To incorporate classroom materials to assist the outdoor sessions.
- * To become a venue for Permaculture design courses.
- * For the garden to fund itself through activities like the above.

Priorities:

It was important to assess some priorities in order to create a phased plan of implementation for the design. Also having a limited budget meant that I needed to decide on what it was best to spend that money upon & what would wait a little longer for further funding if necessary. The main elements that I needed to address immediately were the following:

- * Producing a draft design drawing & suggestions for the School.
- * Topping up funding (needing to apply for grants & that would require a funding document).
- * Identifying relevant funding bodies & finding out when they met.
- * Identifying the areas that I needed help with so that I could seek it out.
- * Finding out what classroom materials were already available to back up the outdoor teaching.

For the funding document I also needed to determine:

- * The overall costs for the project.
- * The educational aspects of the different gardens.
- * A plant list for each of the gardens.
- * A phased implementation scheme, starting with planting the trees.

Of course, this last element provides me with a prioritisation of tasks for the rest of the implementation process. First of all though I needed to come up with a budget for the design.

Costings:

I started to work out some rough costings for the project, looking initially at the price of materials such as fencing (until the hedge became established), plants & trees. I didn't know what to charge for my work; either the designing, research & fund-raising or the actual labouring that would inevitably come later. This was something that was going to require me to know how many hours it was all likely to take me & quite frankly, without having any similar experiences to compare it with, I didn't have a clue. I needed more help with this element of the design in particular & I sought it from my Design support tutor, Simon Shakespeare.

At this time I also obtained from the Permaculture Association a list of potential funders to approach that might help out with the project costs.

Funding document:

With the lack of an appropriate budget it was clear that we were going to have to seek additional funding for the project. This was completely new territory for me, but I did find out that before we could apply to any grant-making bodies, I was going to have to come up with a funding document. This was to explain to the funders the all the 'whats', 'whys' & 'hows' & to provide a realistic figure for the costing of the project. In order to get some advice on this I booked a Diploma Support Tutorial with Simon Shakespeare after I met him to install a display in Exeter's main library. I asked him about his own experiences being involved in L.E.E.P & how they had dealt with funding, planning & such matters. He brought along a copy of the L.E.E.P funding document, which was shorter than I had expected & I noted down the headings that they had used to give me more of an idea how to go about producing one for the School. Using Simon's advice & feedback I was able to start putting together the funding document & to decide what I needed to say inside it, though the costings that he was suggesting were way beyond what the School had available to put towards the project.

I'm not sure that I went away feeling any clearer about this aspect of the design, which was as much down to me not asking enough of the right questions. I did get a boost though when I was able to obtain a list of potential funding bodies from the Permaculture Association at this time. Having ascertained that there were actually some addresses for me to write to, I now needed to put together the funding document to send to them all. Following Simon's advice, I decided to keep the main part of the document to a few pages & then add appendices for those who wanted to know more details.

The main body would include details like the purpose of the project, the design drawing, a timescale of phased implementation & a budget. The appendices would cover the finer detail of what we were planning to do & would also include an explanation of Permaculture, for those who were unfamiliar with it's ideas.

I was also going to include appendices about the educational aspects of both the History & Permaculture gardens, I just had to decide how to present the ideas. I already knew what the School wanted to do with the History gardens, as they were the experts at teaching this subject, but I was the one with the Permaculture knowledge.

My original client interview had given me the opportunity to discuss with the tutors what potential learning opportunities lay within the Permaculture garden. Now it was time to clarify what they were going to be & categorise them for inclusion in the Funding document.

The different elements that I came up with fell nicely under the following headings:

Observation: Taste. Texture. Sound. Colour. Scent.

Resources: Composting, fertility & the food cycle. Recycling rubbish (John Yeoman style); pots, cloches, mulches etc. 'Weeds' - what they tell us, what uses they have. Biofuels. Microclimates. Water catchment. Dye plants.

Natural balance: Companion planting / guilds. Diversity (beneficial relationships). Habitats (attracting pest predators). Ground cover (mulches; living & 'dead').

Minimum effort for maximum effect: Zones & sectors. Stacking (vertical & temporal). Low maintenance perennials, shrubs & trees. John Yeoman 'lazy gardener' techniques etc.

Design: Shelterbelts. Guilds. Multiple supply & yield etc.

Creativity: Willow sculpting. Dyeing.

Many of these elements would also require back up classroom materials, which were going to have to be created as far as I could see & this would tie in with the Permaculture & the National curriculum working group that I had also got involved in. The other appendices would include the plant lists for the garden & their reasons for inclusion. This information was already mostly gathered; both from my research into the historical use of plants & from my own experiences of growing plants, particularly in Eire & Somerset.

Planting:

I devised my planting implementation scheme based upon a logical order in which to create the garden, the time that I anticipated that it might take to do & the practicalities of when it was possible to plant (i.e. trees during the winter months). The process of choosing the different plants that I have listed in the appendices was done by listing the possibilities & then deciding which were the most valuable species to be included. For the canopy, fruit & nut trees, this was an important process as these will be large & essentially fixed elements in the garden & there are not many places to be had. The smaller species are easier to move or replace & so these lists are less precise. I start out with species to try first & as the garden evolves, these will be moved around & replaced where necessary to find the most successful ones & the best sites for them. Plants for different purposes may be more or less practical to use & as for instance, my experience with dye plants is very limited, I may not be choosing the best species for dyeing with. All these lists then are open to being adapted & added to on an ongoing basis.

With all of this work done I was then able to pull together a first draft of the funding document, minus the costings & a few smaller details. To fill these in, I needed to get some more feedback from the school about my design ideas, only then could I complete it to everyone's satisfaction.

Possible Options

Draft design:

At this point I was finally able to create a draft design for the garden, incorporating all the main elements required. Because we were going to be including gardens from different periods in history, it was suggested to me that a timeline could be used to lead students through the site. I could see that this could also be used as the thread that tied the two main elements together. We had the Historic gardens, the three 'modern' land uses & then we had Permaculture; the future garden!

I sent this drawing to the School along with the letter below, describing what I had been able to find out about the different historical periods & explaining a little about what the Permaculture garden would be able to demonstrate.

I outlined the possible options & asked for some feedback about my ideas for the garden, so that I could go on & produce a more final design. At this point I also mentioned my concerns about the budget being so low & asked them if they had any connections of their own that could potentially yield any grants to help fund the project.

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Feedback:

As you can see, the feedback I received from the tutor I was liaising with was very positive, but again reflected my own concerns about the budget. She asked me to come up with a phased & costed plan & so once again it came back to me finishing off the funding document.

Summary:

This proved to be the point at which I stumbled over the costings for the project & this was tied in with my inability to estimate how much of my time the project was going to involve & what my time was worth. Previous experiences where jobs took far longer than I had originally estimated were making it hard for me to propose a fair figure without risking ending up having to do the job for a pittance. Then an additional issue came up around the possibility of placing an eco-building on the concrete foundation instead of a modern chemically-impregnated shed. This could be utilised as a classroom, an undercover exhibition & a demonstration of permaculture construction techniques. A straw bale building would fit the bill & also be a modern version of the wattle & daub house that stood only a few yards away. Of course, this extra element brought in much more for me to consider, including more of those dreaded costings. It also meant that if I made the garden beds first, the access for the delivery of materials was going to be very restricted.

I felt that it most certainly would make no sense energetically to do anything other than putting the building up first. I contacted Simon Pratt, having attended a slideshow on strawbale building that he had done at the East Meon convergence & what he told me suggested that the building may cost in the region of £1000, using volunteer labour. There were also planning issues to consider though & he gave me the address of a local person who would be able to give me more advice on the subject.

I had received feedback from the tutor about my draft design at the end of August, but I spent the winter trying to come to terms with the costings & the extra eco-building element that I really wanted to include.

Before I knew it, it was Spring & the chance to plant out the bare-rooted trees was gone for another year with eco-building plans & costings still to be worked out & funding still to be applied for. I hope that one day, with more knowledge & experience I will be able to complete the project (the site is still just grass & there is no shed on the concrete foundation). For now though, this is as far as I have got.

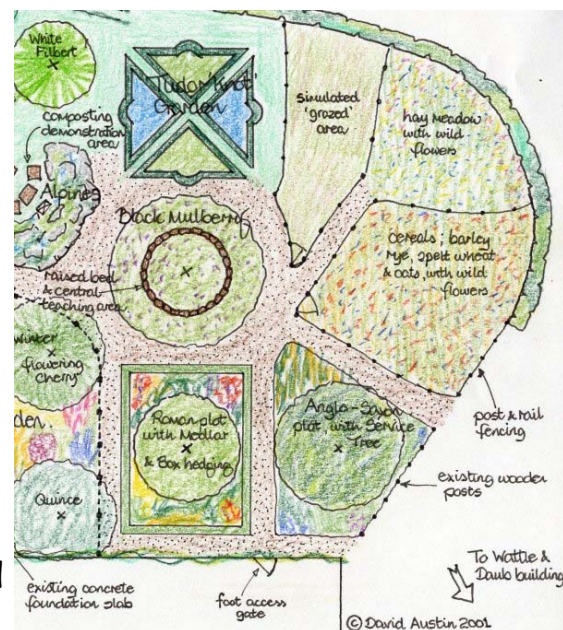


The access into the garden from the south is through the area where the wattle & daub building stands, providing an extension to the History teaching area. Apart from the Medlar & the Service tree, none of these gardens will contain any very tall elements, so they do not cast any shade on those behind.

The simulated grass & cereal areas will receive the full sun that they would typically be exposed to. As the School doesn't want the responsibility for any animals in the garden, the grazed area will have to be simulated as best as possible (by mowing it), but not in such a sustainable fashion. However, considering the fact that the whole site is currently being mown, this would be quite a step forward! The gardens to the south are all of curved & chaotic form. In contrast, I have placed the more formally ordered & squared-off gardens of the Romans & the Tudors either side the circular central element, to try & soften their impact on the rest of the area. The details of the plantings in these gardens can be found in the Funding document below. In order to keep the drain cover in the middle of the site accessible, but not very visible, I have surrounded it with the rockery on one side & the composting area on the other. The alpines on the rockery are there to represent the ice age period & the planting here will be carried out by the tutor I have liaised with, who specialises in these species.

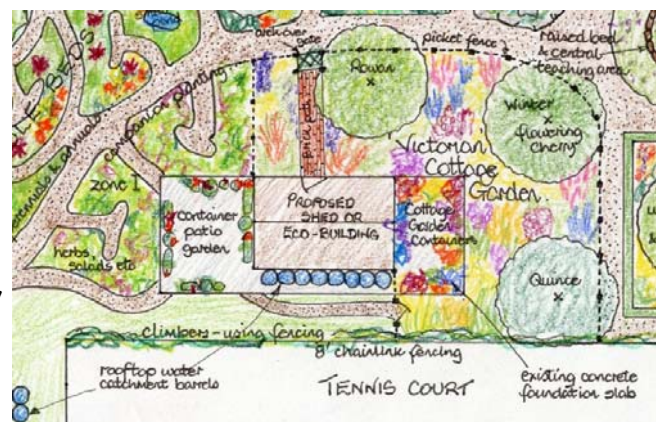
The Victorian cottage garden also borders this central area & at it's opposite end surrounds the eco-building on two walls. It is bounded by a picket fence & contains three small trees, a Rowan (traditionally planted at the gateway for protection), a winter flowering Cherry (for early colour & bird food) & a Quince (once a popular fruit for preserving).

These trees provide a certain amount of shade in the garden & around the eco-building & collectively with the other trees in that area go some way to breaking up the square edges of the tennis court fencing & the building too.



I am placing a traditional archway over the gate to provide more vertical climbing space & using the bricks from the low walls around the concrete foundation to make a traditional brick pathway to the building. The cottage garden is a fairly chaotic affair & will be relatively low maintenance compared with the other History gardens. Because the list of plants that I have from this era is so extensive, I am planning on mainly planting species here that also have Permacultural uses. This way, the two gardens in a sense blend together in this area. The part of the foundation not under the building can be utilised as a cottage container garden.

The eco-building itself would best fit into the garden as a straw bale construction. This would connect with the wattle & daub building, being essentially a modern version of the same thing, whilst also demonstrating the practicalities of such a dwelling. It will double as both a classroom



& an exhibition space, which would contain lots of information about the garden & about the construction of the building too. The building would provide another opportunity for rooftop water catchment & this could be stored behind the building in recycled barrels, connected together. These will provide water for the two container gardens, where it will most be needed. The sports hall roof already provides an opportunity for rain catchment which could also be utilised in the garden. The unsightly chainlink fence provides an ideal climbing trellis for vigorous plants such as Passiflora, Kiwi, Akebia & Honeysuckle (in the Cottage garden section).

The eco-building also acts as the 'home' in terms of demonstrating the use of zones in Permaculture design. Zone 0 is the building itself, then the area surrounding it & the most used walkways are classified as zone 1; this is the intensively cultivated area where plants requiring the most attention are placed. Next to the 'house' is the concrete left over at the north end of the building & this is being used as a demonstration 'patio' area for alternative container gardening.

It will have a shaded area provided by the building, which would provide a place for shade-loving plants & help to prevent summer salads going to seed too quickly. This area will be where we demonstrate how lots of waste materials like yogurt pots, juice cartons, old toilets & tyres can be used successfully as containers to grow food in.



Just beyond the patio area, but still in Zone 1 are the keyhole beds. These are designed to maximise the growing space & minimise the paths needed, whilst also providing naturally curved routes through the garden.

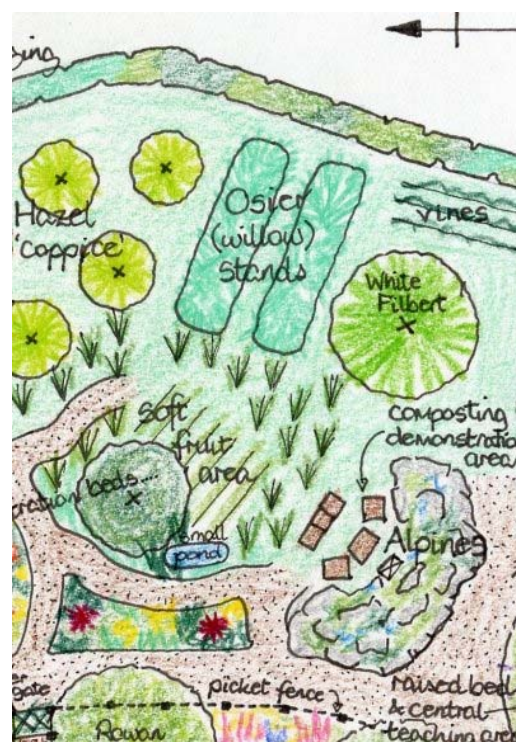
These are planted up with a diversity of herbs, salads & vegetables, plus the occasional small shrub, such as a soft fruit bush. This area will utilise such techniques as mulching, companion planting (guilds) & vertical stacking to demonstrate their value in the garden. The entrance into the garden in this corner is via a footgate next to the sports hall. I have designed the path

to follow the natural flow of people over to the wattle & daub building in the south west corner, skirting around the eco-building, but allowing routes off this main path to explore the rest of the garden. One such detour takes the inquisitive student into a small series of tunnels made out of living Willow woven together at the top. This is one of the interactive teaching elements that no doubt the children would be involved in creating.

Exercises in observation for instance will also be encouraged by the planting of species with a diversity of tastes, scents, colours, textures & sounds (i.e. when rustled). Small ponds provide habitats for a host of other creatures, whilst not being very dangerous for the children to be around. Just to the north east of the keyhole beds are the smaller fruit & nut trees, which provide a crop every year for little work & attract pollinating insects into the garden during the spring.

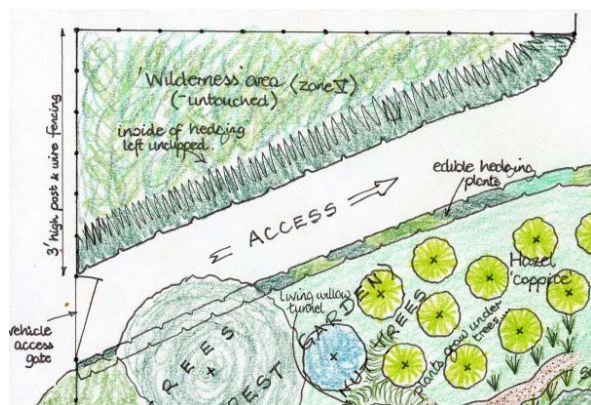
Behind these are the canopy trees which provide further shelter for the whole site from the north winds, habitats for wildlife & more crops too. Beyond the trees along the eastern side & around to the southern boundary is an edible hedge. This will consist of native species that provide food for humans & wildlife alike, plus biomass, habitats & shelter. The pathways around the site will be wheelchair friendly, but I'm not yet clear about the best way to do this. While concrete would provide a suitable surface, I would rather find a more natural alternative to using this. Some of the beds will be raised to allow wheelchair users to be able to garden at a height most suited to their needs.

The main area for growing biomass & building materials though will be a couple of stands of Osier (Willow) & an area of Hazel coppice. These will provide some materials for the children to do crafts & project work & to learn about how these plants are managed to produce them. While the Willow may be able to provide quite a lot of the material the School uses, the Hazel will take some time to become productive & as it is usually cut on a seven year rotation, it won't provide much more than a demonstration area. Whilst there is insufficient room in the garden for any more coppice, another area nearby could be planted up at the same time to provide the extra materials needed if desired.



The White Filbert is planted here at the end of the belt of fruit & nut trees as it was introduced by the Tudors & so again provides a link between the different gardens. Several rows of vines will also be accommodated in this area too, showing that good grapes can be grown outdoors in the South west of England, just as long as the right varieties are chosen. The composting area provides an opportunity for students to learn about the many different ways that this can be done & the importance of compost in maintaining a productive, healthy soil.

A selection of methods will be demonstrated, including a wormery, leafmould bin, modern plastic & recycled pallet bins & the pros & cons of each will also be explained. One of the ways that this will be done is by using a variety of signs & these will also be sited around the rest of the garden, wherever an element is placed to demonstrate something. Next to the composting demonstration, there is an area of soft fruit bushes. Whilst soft fruit is also dotted around under the trees & in the beds, this is the place (in zone 1) where they can be most easily managed. Here they will get more sun than those under the trees & so they should provide an earlier crop. A variety of fruits will be grown here to demonstrate the diversity of species & cultivars available & to provide extra tastes for the observation exercises. Although it is not



really possible in such a small space to really demonstrate zoning, I am including a 'wilderness' (zone 5) area. Currently, this is mown grass like the rest of the site, but given time, the pioneer plants will start off the process & it will return to a much more wild state. As vehicular access is required through the field gate

from the car park, the obvious place for zone 5 to be is in the far corner beyond the gate. This enables me to plant a hedge either side of this access & create a natural boundary for both the garden & the zone 5 area. By not including any human access into this area, I hope to keep it as undisturbed as possible. Whilst the hedge could be trimmed on the outside to keep the vehicular access clear, on the inside it can do whatever it wants to & quickly become a valuable habitat for wildlife. The main garden hedge too will in time become a wildlife corridor around the garden, which is also part of zone 5 in the design.

Funding Document

This is the funding document that I came up with. It still lacks the costings required for it to be usable & since I wrote it the eco-building also became a possibility, which is why it is not included here. It includes a phased implementation schedule for the design (part of the Australian design cycle), though the inclusion of an eco-building in the design would probably make its construction the new phase one.

Design Review

What went well

Without setting out to be negative about this design, there isn't much that I can honestly put into this section. **Client interaction:** My meetings with the tutors at the School were very positive & to receive so much enthusiasm for the design from them was very encouraging.

Site analysis & design: While this is a big category, I felt that the whole design process went well, especially trying out the new macro design procedure. I was really pleased with the basic design that I came up with & excited that it was going to be used primarily for educational purposes.

Funding document: Despite all the challenges that I had pulling it together & the total lack of costings within it, I was really pleased with the final result. Reading it again now, I think that it looks very good & could achieve it's objective... with the addition of those missing figures of course!

What was challenging

For once, this section is really full! **Budget:** Clearly the budget was far from adequate for the project & it proved enough of an effort to even persuade the School governors to raise it from the original £500 up to £1000.

Funding: The whole process of funding such a project left me incredibly challenged. I felt completely out of my depth as I knew virtually nothing about the process & had to learn as I went along. I was finally able to produce the funding document with some feedback from Simon Shakespeare, but it still lacked those important costings.

Costings: I had little idea how to cost the project, fixed elements like trees & fencing I could cope with, but when it came to working out how many hours it would all take I felt it was all too much guesswork. I didn't want to overcost the project & not get any funding, but I also didn't want to risk working for a pittance either. Seeing the opportunity to plant trees over the winter months tick by as I tried to work out a budget added an extra sense of racing against the clock & I didn't enjoy it at all. Needless to say the costings were never fully calculated.

Plant research: Though this was relatively less challenging than the previously mentioned elements, it was however still difficult to find the information that I needed to compile the plant lists for the History gardens & it took me far longer than I had anticipated.

Disabled access: While this is clearly a very important subject, the need for wheelchair friendly paths for instance was giving me another headache. Apart from the extra cost that this would involve, the only path surface that seemed to be acceptable was concrete & I really didn't want to have to lay that down all over the garden. Like the costings, this issue never got resolved.

Classroom materials: I could have created some classroom materials to back up the garden teaching sessions, but it seemed more sensible to save work by seeking out what already existed first. I discovered that there was a Permaculture & the National curriculum working group which I got involved with, but my initial enthusiasm for generating these materials was not enough to move it forward. I felt out of my depth there, not having the teaching background & knowledge about the National curriculum & I didn't really feel able to contribute.

What I would do differently

Despite all the challenges that came up, I don't see many things that I could have done differently. Of course, the design has not been implemented (yet?) & so nothing has been done that I could now change my mind about. **Funding:** As calculating the funding was clearly my main block to taking the project forward, I think that I ought to have been more determined about seeking the help of someone who could really help me with this & to not be afraid to say that I was well out of my depth with it.

Building: I would have liked to have thought about the eco-building earlier & offered it as another option in my letter to the School. That would have given me more time to look into the planning issues to do with this & to cost it properly. **Persistence:** I really needed to keep going, despite my difficulties & not to let them overwhelm me to the point of giving up after all the work that I had put in.