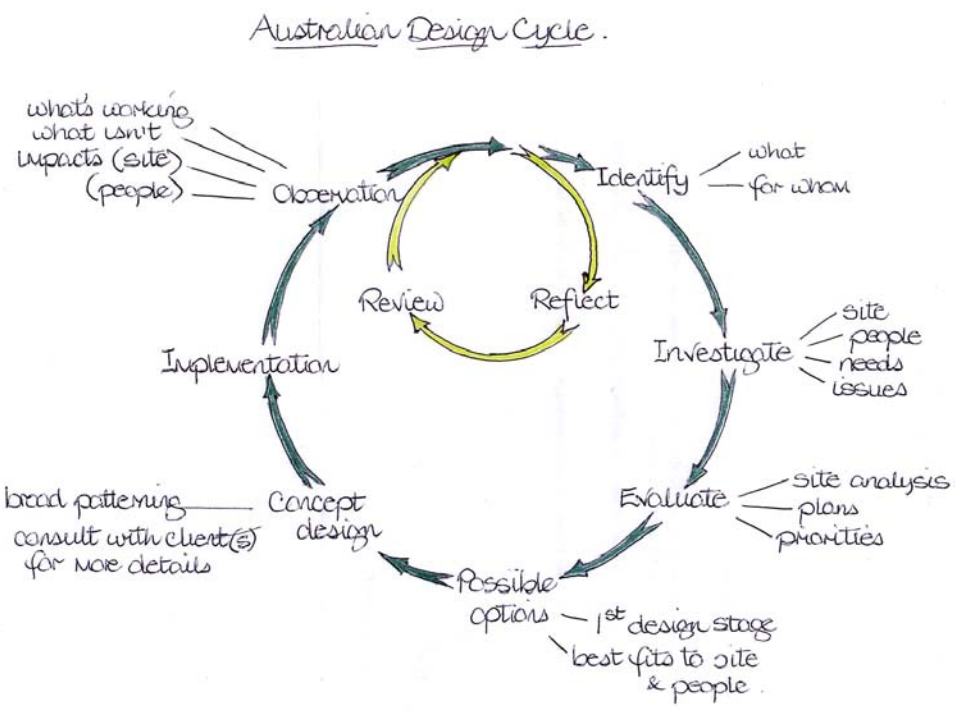
School Garden

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.

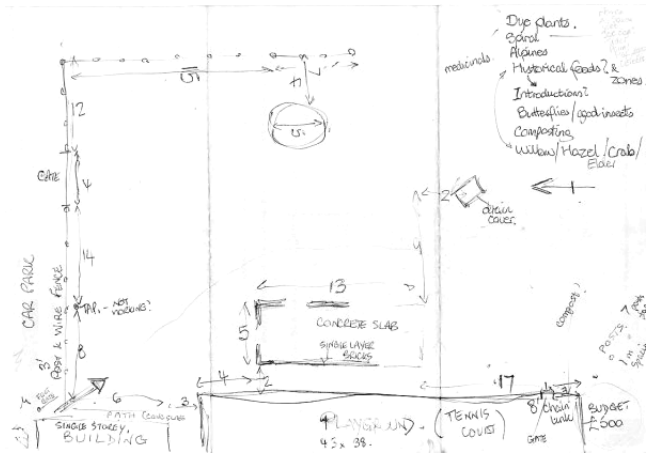


Identify

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 liasing 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 handouts & 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.