

### Quotation

We are living in a world today where lemonade is made from artificial flavours and furniture polish is made from real lemons.

*Alfred E. Neuman*

### The Ingredients for a Banquet

In a time where culinary alchemists such as Adria & Blumenthal are subverting and reinventing food and challenging our senses, it is worth turning to our own creative discipline to explore how architects are shifting our understanding of the possibilities of built form.

Technology, material innovation and working design practices are allowing architects to push boundaries, create and realise the 'unbuildable'.

From a pedagogic viewpoint, how does this affect the student's fundamental understanding of materials, structure, hierarchy & tectonics?



*Cloaca Original*  
by Wim Delvoy



*Blur*  
by Diller & Scofidio

### Proposal

This design study looks at the relationship between ingredients, cooking and eating as an analogy for materials, design and the application of architecture.

Working with a sustainable rural community, who will act as the client and site, we aim to encourage students to develop designs which consider sustainable principles and understand the environmental impact of their design proposals. The community's own permaculture garden will provide the starting point for our study of the relationship between food and architecture.

The design study will be run as a competition offering students the opportunity to develop a proposal that will be built during the summer of 2010.

The design process will involve individual student proposals; the construction is open to all students or other interested volunteers.



*Chromatic Diet*  
by Sophie Calle

### Aims & Objectives

- 1) To examine the relationship between client and designer;
- 2) To develop a sustainable architectonic language from first principles;
- 3) To improve non-verbal communication skills through the use of a competition format;
- 4) To develop environmental design skills through the hands on collaborative process of construction.

Client  
Biological Architecture Foundation  
Site  
Coed Hills Rural Artspace, St Hilarys, Cowbridge  
Brief  
The Outdoor Kitchen

Coed Hills Rural Artspace is one of Wales' leading centres for sustainable living and the creative arts - a centre of education focused on nature, sustainability and traditional woodland skills and crafts; contributing to local tourism, employment and the rural economy. The residents manage the land and work on a variety of jobs needed to support the site in exchange for the basic facilities for living. Coed are working towards self-sufficiency in energy production: this will reduce their costs and their effect on the local and global environment, and serve as a living experiment in what is possible. They are constantly exploring and sharing what they learn both from cutting edge technology and from the knowledge and wisdom of previous generations.

They grow food following permaculture principles and aim to demonstrate ecological land use, low-impact living and artistic creativity, as well as giving people the opportunity to experience and practise all these things for themselves. As a social enterprise they offer a range of opportunities to people in the area: local organisations, schools, colleges, and a diverse range of individuals and families use their facilities for pursuits ranging from family camping weekends to wedding receptions and charity events.

Over the past decade Coed Hills has become a valuable asset to the Vale of Glamorgan. It has also brought people to the area from all over Britain and beyond for the purposes of education and entertainment, particularly the internationally renowned art trail, currently undergoing woodland management and improvements. Following a period of complete renewal there will be a phased reopening from Autumn 2010.

Part of the growing permaculture systems being developed is Forest Gardening. This is a way of growing food based on combining plants together in woodland-like patterns that forge mutually beneficial relationships, creating a garden eco-system that is more than the sum of its parts. An established forest garden will give high yields of diverse produce such as fruit, nuts, vegetables, herbs, medicines, fuel, fungi and fodder, be largely self-maintaining, self-fertilizing and self-watering and be a healthy eco-system rich in habitats for beneficial insects, birds and animals.



Coed is about creating spaces in which human beings can behave naturally - where creativity grows of its own accord. It is essentially a test site and inspiration for kindling alternative or forgotten life support systems which may prove vital in the context of escalating ecological challenges. It is also a place that nurtures the intrigue into the esoteric traditions which may equally prove vital for the health of communities. By balancing the needs of the environment with the needs of people, Coed is a signpost on an evolving planet.

A variety of courses are run at Coed which focus on the sustainability and health issues of food systems. An upcoming course run by *Grow Sheffield* exemplifies the ethos of Coed with regard to these issues:

*Organic Horticulture from a Permaculture Perspective with Stephen Watts from Grow Sheffield.*

*A Series of day workshops focusing on the practical application of 'Permacultural' thinking, applied to food culture; the processes by which we provide our food. They aim to deepen our awareness of:*

- 1. How food is produced*
- 2. How to grow our own food organically, with simple means*
- 3. How to forage for food*
- 4. Plants; identification and uses.*
- 5. The cycles and seasons of nature.*
- 6. The culinary and medicinal properties of plants and how to prepare them for culinary as well as medicinal purposes.*

### The Forest Kitchen

The existing outdoor kitchen facilities at Coed are worn out and were only meant as a temporary solution. As part of the current regeneration of Coed a replacement outdoor kitchen space will add value to the site.

The new outdoor kitchen will serve as an education facility for connections with the wider community, for example involving cooking classes and preparation of herbal remedies. Furthermore, it will integrate with the food systems on site as well as reaching out to neighbouring enterprises. The facility may even prove to be profitable if used for sought after culinary processes.

The new design shall be situated in the existing fire pit area and be of a similar size to the current kitchen area. The design shall be durable and the lifespan of the structure should be at least ten years. The kitchen shall be sheltered from the rain above and to the sides, but the walls should be non-permanent. It shall be safe to use and hygienic and integrated with the permaculture systems already in place on site including composting, fertilization, home grown food, wood burning, tree felling, chickens, water treatment and soil improvement.

*The kitchen will be a meat-free zone.*

It must sit well with the relaxed forms and ambience of the existing perimeter logs and curved wooden seating, which will be preserved:

The design must include:

1. An outdoor oven suitable for baking bread and pizzas;
2. Storage for fruits, vegetables, herbs, eggs, dry food and water;
3. A preparation worktop ;
4. A food waste container.
5. Storage for solid fuel

The design may also include:

6. An insulated slow cooker;
7. A dough proofing chamber;
8. A fruit drying chamber;
9. The ability to grow herbs and salad to hand.

To be true to the Coed ethos, and to be in line with the other artistic forest interventions at Coed, the design should evolve from an intuitive conversation with the place and take into account the Genius Loci or 'spirit of the place'. Additionally, the forms, proportion and geometry of the kitchen should be conducive to the activities of storage, food preparation and cooking - so that such activities come naturally when in the space.



### Ingredients

Coed will prefer it if the specification consisted of recycled and reclaimed materials rather than new materials. Found materials from the site may also be used such as wood, earth, clay and sawdust. The ingredients shall be a reflection of your food analysis.



## Food for Thought

Other points of reference provided by The Biological Architecture Foundation.

### The Hearth

*"The cosiness of flame-heat is unmatched; similarly, fire-cooked food-appeal, even if burnt! Brick or clay outdoor ovens (clay needs rain-protection) are easy to build and safe to operate. (for doors, planks draped in wet sacking usually suffice.)*

*At Summerfield - after growing, mowing, threshing, drying and grinding wheat - children gather and split wood, tend fires, cook and bake bread. This makes the whole process of food preparation comprehensible and accessible. Central to this is the transformation of substance wrought by fire. Fire also transforms things through burning, melting and smelting.*

*At Solgarden School, kindergarten children watch older ones firing pottery, blacksmithing, charcoal-making and cooking over open fires. Whether working with, or even just watching this, children learn much.*

*Transformation is another key life lesson. It teaches that nothing is permanently bound by its composition and form. Moreover, so central to life are combustion-transformation processes, that to not understand them is intellectual - not to mention soul - impoverishment. As architect Kerstin Thorn pints out, 'learning about oxidization and fire without experiencing fire is like learning about craftwork without making anything.' Even more importantly, fire has deep archetypal roots - involving food, warmth, society and safety. Until recently, you couldn't live without it. Hence its magnetism - especially for children. This makes fire a soul-necessity."*

*Environment and Children - Passive Lessons from the Everyday Environment. Christopher Day.*

### Permaculture

*"Permaculture is an approach to designing human settlements and perennial agricultural systems that mimics the relationships found in natural ecologies. It was first developed practically by Austrian farmer Sepp Holzer on his own farm in the early 1960s and then theoretically developed by Australians Bill Mollison and David Holmgren and their associates during the 1970s in a series of publications. "*

[www.wikipedia.org](http://www.wikipedia.org)

Central to permaculture are the three ethics: care for the earth; care for people; and fair share. They form the foundation for permaculture design and are also found in most traditional societies.

## 12 Permaculture Principles by David Holmgren:

- 1. Observe and Interact - By taking the time to engage with nature we can design solutions that suit our particular situation.*
- 2. Catch and Store Energy - By developing systems that collect resources when they are abundant, we can use them in times of need.*
- 3. Obtain a yield - Ensure that you are getting truly useful rewards as part of the working you are doing.*
- 4. Apply Self Regulation and Accept Feedback - We need to discourage inappropriate activity to ensure that systems can continue to function well. Negative feedback is often slow to emerge.*
- 5. Use and Value Renewable Resources and Services - Make the best use of nature's abundance to reduce our consumptive behavior and dependence on non-renewable resources.*
- 6. Produce No Waste - By valuing and making use of all the resources that are available to us, nothing goes to waste.*
- 7. Design From Patterns to Details - By stepping back, we can observe patterns in nature and society. These can form the backbone of our designs, with the details filled in as we go.*
- 8. Integrate Rather Than Segregate - By putting the right things in the right place, relationships develop between those things and they work together to support each other.*
- 9. Use Small and Slow Solutions - Small and slow systems are easier to maintain than big ones, making better use of local resources and produce more sustainable outcomes.*
- 10. Use and Value Diversity - Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides.*
- 11. Use Edges and Value the Marginal - The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system.*
- 12. Creatively Use and Respond to Change - We can have a positive impact on inevitable change by carefully observing and then intervening at the right time.*

### Fix the Food Chain

Initiated by the Cardiff Friends of the Earth local group, the Cardiff Food Alliance is organising a month of action in April 2010 to begin to Fix this Food Chain, and we need your help!

1. Work with farmers, get their support and promote farmers' markets
2. Promote local food producers, cooperatives, allotments and community gardens
3. Work with Oxfam and the World Development Movement on a political hustings before the election
4. Work with Transition Towns Cardiff to show films that expose the broken food chain
5. Promote other food-related activities

<http://cardifffoodchain.wordpress.com/>

### Links

[www.coedhills.co.uk](http://www.coedhills.co.uk)  
[http://www.youtube.com/watch?v=W\\_9avY6NMAc](http://www.youtube.com/watch?v=W_9avY6NMAc)

[www.biologicalarchitecture.co.uk](http://www.biologicalarchitecture.co.uk)

[www.permacultureprinciples.com](http://www.permacultureprinciples.com)

*Hungry City - How Food Shapes Our Lives*  
Carolyn Steel

*Passive Lessons from the Everyday Environment*  
Christopher Day

*Permaculture - Principles and Pathways Beyond Sustainability*  
David Holmgren

### Riverside Community Market Association

#### Aims:

1. to provide a source of healthy, affordable and tasty food for the residents of Riverside, wider Cardiff and surrounding areas;
2. to promote a positive image of Riverside, and to contribute to the economic regeneration of the area;
3. to contribute to the health and sustainability of Welsh agriculture by providing an outlet for small local producers;
4. to create a friendly, accessible and pleasing space where everyone can feel welcome - promoting links between all sections of the community.
5. to deliver a range of healthy eating projects based in the local community - including our Community Garden and Community Food Coordinator

RCMA's farmers' markets are run as a not-for-profit social enterprise. In allocating stalls, priority is given to vendors from the local area.

[www.riversidemarket.org.uk](http://www.riversidemarket.org.uk)

### Love Food Hate Waste

In Wales we throw away a staggering 330,000 tonnes of food each year. Some of this waste is made up of things like peelings, cores and bones, but the majority is, or once was, perfectly good food that should have been eaten.

That's why Waste Awareness Wales is promoting the "Love Food Hate Waste / Hoffi Bwyd Casau Gwastraff" campaign to help reduce the amount of good food that is being thrown away by households across the country.

[www.wasteawarenesswales.org.uk](http://www.wasteawarenesswales.org.uk)

## Programme

Friday 23rd April 2010, 6.30pm at WSA

Group meeting to talk through the programme and discuss the ways in which you can approach the project. We will meet Alex from Biological Architecture Foundation (our client) and hopefully a representative from Coed Hills.

## Week One: Ingredients for a banquet

Each student will select a recipe for a dish to be eaten as part of a group banquet at the end of the project. The choice of recipe may be driven by ethics, economics, culture, ability, diet, methodology, or for no specific reason. The preparation process will consider the sourcing and combination of ingredients, the cooking method, waste and by-products, the cultural or historic relevance of the dish, as well as its taste, appearance and presentation.

Friday 30th April 2010 10am at Coed Hills Art Space

Your findings from this exercise will be presented to the group during a site visit to Coed Hills. The visit will allow students to meet the client, get a feel for the site and surroundings, undertake site analysis and better understand the needs of the community who will use the Forest Kitchen.

## Week Two

Learning from the outcomes of the banquet and from the site visit, examine the requirements of the brief, and use model making to develop a design proposal using construction 'ingredients', method of assembly and innovative design outcome. This could be in the form of a structural analogy, a tectonic recipe, a particular cooking method or assembly, a food metaphor etc.

Friday 7th May 2010 at WSA - 10am - 5pm

Group tutorial - all to attend.

## Week Three

Develop further your design proposal using model making and detailed drawing. You may need to visit site again to check measurements and siting, or to ask the client specific questions about your proposal.

Friday 14th May 2010 at WSA - 10am - 5pm

Group tutorial - all to attend.

By this stage you should be content with your proposal and be concentrating on refinement of detail and presentation.

Wednesday 19th May 2010 at WSA

Final Crit including the banquet. Your presentation *must* include the preparation of the recipe from week one.

## Detailed Requirements

Friday 23rd April 2010, 6.30pm at WSA

Please come to the meeting with this document, along with the site maps. Your research should begin immediately, and take advantage of the weekend to visit farmer's markets and food producers to gather ideas.

Friday 30th April 2010 10am at Coed Hills Art Space

Organise transport to ensure you are at Coed Hills no later than 10am - lateness will not be excused.

The X2 bus service runs an hourly service from Cardiff and Porthcawl. There is a little bus stop on the A48 that will drop you just outside St. Hilary. You will need to ask the bus driver to stop at St. Hilary as it is a minor bus stop. You can walk from there.

Present your analysis on 2no sheets of A3 mounted on foam board. Be careful to protect them so they survive the trip and are maintained for the final crit. This work must be graphically strong, presented using desktop software - not cut and paste. The analysis is to be clear and precise - a verbal presentation should not be required to explain your ideas and findings.

Friday 7th May 2010 at WSA - 10am - 5pm

A model or models will be required to explain your thinking. The process of making is critical to the project. Reviewing your recipe may help to evaluate your design decisions. Analysis of cooking techniques and/or the construction of traditional cooking appliances will assist the discussion. The more you produce in this first week, the better the feedback.

Friday 14th May 2010 at WSA - 10am - 5pm

You should have a number of models which show the iteration of the design process, and how you intend to assemble your kitchen. Your research and sketches will provide the story board for your final presentation.

Wednesday 19th May 2010 at WSA

Final Crit including the banquet. Your presentation *must* include the preparation of the recipe from week one. Work will be presented as 6no. A3 sheets, including the recipe analysis, along with your models. A competition format template will be provided.