

Eco-Specialisms

As part of my philosophy for sustainability I have endeavoured to promote the following specialisms to my clients and to the general public at large. Some clients and friends have undertaken all of them while others have included just one or two depending upon their circumstances. At long last there is a much greater awareness and understanding now about the need for these to be considered an essential part of our whole lifestyle and not as a “maybe ” as it was many years ago. There is also much more choice of the various systems and the costs have all become much more reasonable

Small Buildings

My designs for small buildings such as changing rooms, workshops, studios, etc can all be made from natural materials such as timber, stone, recycled bricks, tiles and second hand items such as doors and windows. Some can even have green roofs.

They can all be aesthetically pleasing and are designed to suit your location and your requirements.

Waste Water Treatment

If you have a large garden and want to save water and the environment, then the use of reed beds for the cleaning of your waste water is well worth considering. Reed beds are simply ponds into which liquid effluent- the solids having been removed- is channelled and which is then converted by the plants, the microbes and the chemical properties of the soil or gravel into clear and clean water.

Ponds are generally lined to prevent any seepage into adjacent ground and then filled with gravel and soil, which acts as a base for aquatic plants and the reeds.

They can work with or without a septic tank system but it is very important that they are properly designed and planned.

Rainwater Harvesting

The main aim is to collect as much water from the roofs of buildings and store it in suitable containers/tanks generally underground, for re-use such as flushing toilets, cleaning purposes, irrigation of the garden, etc. It is also ideal for washing clothes as the water is soft and eliminates conditioners.

Filtration is necessary to prevent leaves and other debris from entering the container/tank via the gutter and down pipe system. There are many proprietary models on the market and a system can be designed that can be self cleaning.

Renewable Energy

There are four major ways in which energy can be obtained for free- solar, wind, water and biomass (vegetation). For the individual owner it depends on the location and size of the property as well as the capital outlay and pay back period.

Solar

Solar can offer water heating through the use of glass panels fixed on the roof of a building with a south facing slope. On average domestic systems will provide approximately 50% of the energy required to deliver hot water allowing for heat losses from stored water. They are used in conjunction with another heat source such as a wood burner which can bring warm water up to the required temperature using very little additional energy

Solar heating by photovoltaic cells convert the energy in light into electrical energy and the power generated is direct current at low voltage. It needs to be converted to 240v ac by means of an inverter, which can be located in an outbuilding. A cable connects the panels to the inverter and the system is then connected into the mains.

Photovoltaic cell panels can operate even in cloudy conditions in the U.K. and will last 20-30 years providing free electricity which is non polluting and generates no CO2 or other emissions while in use.

Water

If you have a stream why not take advantage and use it for the supply of electricity for your home or outbuildings.

Water wheels were once widely used across the country and streams can be harnessed as a reliable and consistent means of generating electricity using micro-hydro generators. These have improved considerably over recent years and they can operate constantly for 24 hours even if the flow rate of the stream is reduced during the summer months. These are the times when the energy demand is the lowest whereas in the winter the opposite occurs.

The amount of electricity produced is directly proportional to the head and the flow rate. If this can be increased then the power output increases proportionately.

The micro-hydro generators need to be located at the correct location for both visual and functional needs.

Wind

Wind has been used to generate power for centuries in this country as can be seen by very old wind mills that are still in existence. Modern wind turbines for domestic use are very slim, not very high – around 30 metres- and do not cause any adverse impact on the rural landscape if sited correctly. Wind turbines generate electricity (2.5 to 25kW) a clean and renewable source of energy in contrast to fossil fuels.

An inverter will be necessary for the conversion to the 240v system.

Biomass

Wood is an ideal fuel for heating and cooking and can be used in various forms from logs to pellets. Modern stoves make it possible for far more efficient use of timber and in the case of pellets a hopper can be installed that does not require to be emptied for three days. The pellets are manufactured from waste wood products and no chemicals are used in the process. They have a low moisture content and a relatively high energy content for their volume and require less space for storage.

Logs and waste wood need to be stored so that they are dry and well seasoned and depending on the type of wood, the location of the store it can take up to three years before it is ready for burning.

Beware of using a multi-fuel stove for cooking as the constant opening and closing of the fuel door does cause considerable dust in the kitchen, which goes everywhere!

Bio-Engineering

This term is used for engineering elements in the landscape such as retaining walls, paved surfaces, building roofs, ground stabilisation, etc that use plants in their construction. This not only improves their visual appearance by making them less harsh and overpowering but allows for better ground drainage and overall functioning.

For example retaining walls can use a timber crib method of construction that has plants growing in the spaces. These are usually known as crib walls.

For paving a similar crib system is used horizontally but made from concrete and this is generally known as grasscrete as grass is grown in between the spaces.

Roofs of buildings can be made into gardens using raised beds made of lightweight materials for both plant containers and pedestrian surfaces.

Many bio-engineering methods are also used for the stabilisation of sloping ground which has been disturbed by developments.

Organic Food Production

Having been associated with growing organically all my life I have always taken a keen interest in its promotion through my lectures and publications as well as convincing many clients to do so. In fact I have tried to go further and include Bio-Dynamics and Permaculture too.

I have designed many kitchen gardens both for my clients as well as myself and can offer a very good Edible Garden Design Service where the area can be a combination of the aesthetic and the practical.

Nature Conservation

There is no doubt that our wildlife is under severe threat from man made developments and many are now endangered species. While we cannot control what happens in the wider landscape we can make sure that provision is made in our gardens for various habitats such as ponds, wild flower meadows, hedgebanks, copses, spinneys, woods,etc that will provide a safe sanctuary for all critters.

If our gardens can be linked and then on through corridors of open space to rural areas, then biological corridors can be achieved. This will allow species to migrate and re-colonise other areas.

Even having just part of your garden for wildlife is a noble and gratifying thing to do.

Michael Littlewood
LANDSCAPE DESIGNER
FLI FSGD

PO Box 25 • South Petherton • Somerset TA13 5WZ

Telephone & Fax: (01460) 75515

Email: michael@ecodesignscape.co.uk Web: www.ecodesignscape.co.uk



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