

## **Eco style over content**

This article was prompted by issues that arise on an almost daily basis working in the field of sustainable water management. Project briefs typically call for an 'eco-building', incorporating sustainable design principles.

### **The problem**

The problem starts when the brief is translated into a building plus a set of what I call, in polite company, eco-icons. These images of greenness are the celebrities of 'sustainability' and, as with their human equivalent, the reality rarely lives up to the image. These icons are easy to spot but just as glass blocks don't equal modern architecture, reedbeds or solar panels don't guarantee an 'eco-building'.

It is useful to sort 'sustainable' technologies into categories albeit with fuzzy and changing boundaries.

The following list is a snapshot based on my judgement at the time of writing. Waterless urinals have been put in all the categories to make the point that different waterless urinal designs can be found that will fit each category although to do so would invite litigation.

### ***Everyday solutions:***

Economic, green, proven performance.  
Water efficient WCs.  
Cellulose fibre insulation.  
Energy efficient lights and appliances.  
Waterless urinals.

### ***Innovations:***

Genuine potential but costs are still high or performance needs refining. Development is needed but there are no fundamental barriers to achieving economic and environmental performance. Concepts and prototypes may be included here.

Low cost water efficient WCs.  
Ultra low flush WCs (with drain flow booster).  
Water-brake taps.  
Rainwater reuse?  
Dimmable compact fluorescent lights.  
Intelligent leak detection.  
Domestic photovoltaics?  
Waterless urinals.

### ***Site or scale specific solutions:***

All technologies are context-sensitive but some are very site-specific. In the right application the following technologies can be appropriate but they are not a green panacea.

Reed beds.  
Compost toilets.  
Turf roofs.  
Wind turbines.

Greywater irrigation.  
Waterless urinals.

***Limes* (green lemons):**

Unforeseen technical breakthroughs might promote some of these to another category but in my opinion these seem to be uneconomic and un-ecological, i.e. conventional solutions are more sustainable by current criteria.

Domestic greywater reuse.

Autonomous sewage treatment in sewerred areas.

‘Natural’ looking sewage treatment systems that need a high energy input.

Autonomous rainwater supplies in mains water areas.

Domestic wind turbines.

Waterless urinals.

In my experience most ‘green projects’ tend to have a bias towards the *lime* end of this spectrum. This could be for a number of reasons including a genuine belief that they are ecological solutions. Clearly the limes are often very grab attention; reedbeds are more sexy than septic systems and wind-generators are more exciting than low energy lights. Seduced by image we might not want to look too critically. Autonomy and self-sufficiency are attractive ideas and who wouldn’t want to cock-a-snook at the water and electricity companies by harvesting our own? Other drivers include techno-fetishism and conspicuous eco-consumption. Also just as we can’t trust people to appreciate the cut and quality of our clothes without a visible designer label, it may be that the width of our insulation and optimisation of our plumbing might similarly go unnoticed!

**Common justifications for limes**

When it is actually acknowledged that a proposed eco-icon is inappropriate for a given project, a number of arguments are usually made to justify its inclusion. These include; ‘it will be good PR’ or ‘it makes a visual statement that will attract funding’ and ‘but it’s educational’ or ‘it gets people interested’. The first two are a shrewd use of *limes* to attract funding or win awards and there is evidence that this works. I can only hope that other aspects of architectural criticism are more sophisticated. The last two are more complex.

The education argument is common but easily dismissed. What exactly is the educational message of a reed bed in a town garden or a small wind generator strapped to a chimney? If the aim of the latter is to illustrate renewable energy then a model is more honest as it has no pretension of real function and so is less likely to confuse. Why not power the building on a green tariff and interpret this with a photograph or diorama of the real wind-farm supplying the power.

The inspiration issue is trickier to address as the least appropriate technologies do engage people. Perhaps these icons can be used with wit and irony to get people to think about the more appropriate but often dull solutions like insulation and light bulbs. If this is the case then only a real icon is needed not an expensive, fully functioning system, which could give the wrong message.

It is extremely unlikely that the author would have ever got involved in ecological sewage treatment and water efficiency if it hadn't been for reedbeds. Similarly it was probably wind generators that led to an interest (no really!) in loft insulation but the journey was long with many dead ends and the destination was not guaranteed by the original inspiration.

When people are genuinely enthused by something that we know to be an illusion do we burst the bubble or think 'at least it's a step in the right direction'? If sustainability is a real issue rather than just a nine to five job, a fad or a scam to gain lottery funding, then we have to burst the bubble. If we don't do this then we will be wasting our time and resources heading in the wrong direction.

### **A way forward**

I see the way forward as threefold:

1. The development of the art and science of sustainability and life cycle assessment. This will allow us to prioritise environmental issues and test proposed solutions.
2. Technical development; design and engineering as well as software development such as education and change of habits and lifestyle. These developments should grow out of and be tested by 1.
3. Marketing. It is all very well working out the technical answers but if people can't be persuaded to adopt ecological technologies or lifestyles they are worthless. This is the biggest challenge. The target audience must be the end-user but also government ministers who can then use regulatory pressure.

The fear is that without the icons there will be nothing to replace them. Given that many of the icons are less sustainable than their conventional 'non-sustainable' counterparts just scrapping them is actually a step forward environmentally if not psychologically. Hopefully this frees ecologically inclined minds and resources to find creative ways to 'market' and promote the worthy but dull technologies in our first category above. Hopefully we can also avoid the inevitable backlash when the eco-icon bubble bursts.

I see two rays of hope within marketing. The first is Amory Lovin's concept of NegaWatts and Negalitres. (<http://www.rmi.org>) This simple word play gives energy and water saving higher value than generation and harvest.

The second is Howard Liddell's idea of Eco-Minimalism. Liddell argues for sensible but radical environmental measures rather than the unthinking application of 'eco-cliches'. Liddell is not the first to argue for such things but a movement needs a name to hang ideas on and I am proud to realise that I am an aspiring eco-minimalist rather than a just an eco-cynic.

Meanwhile technical development can refine the innovations that promise genuine environmental performance. A few may reach classic status - an icon that really works,

whilst others will quietly get on with the job using less resources than before without anyone noticing. A human analogy is tempting....