



Reducing your ecological footprint

Mount Pleasant Eco-Park

COMMENTARY

On the other side of Cornwall, the Mount Pleasant Eco-park is home to local enterprises, workshops, a gallery and campsite. all of them founded on sustainability principles, starting with the four walls and roof over their heads.

The main building has the largest load-bearing rammed-earth wall in the UK.

TIM (VO):

The rammed earth walls in this building are its main feature.

CAPTION:

Tim Stirrup

TIM:

Pioneer Environmental Building Company

Its alternative is concrete which has a very highly embodied energy i.e. a lot of energy goes into the processing of the raw material and the transportation so rammed is the lowest embodied energy of any material because it's a raw material that doesn't need processing and we dig it straight from the site so there's no transport cost.

COMMENTARY:

You can't put up a building like this just anywhere, the rammed-earth technique is site-specific. But other features could be adopted more widely.

TIM

What we've got on the roof of the workshops here is recycled rubber tiles and they're made out of car tyres, it's a recycled product, it's got advantages, that it's light, it's easy to fix.

TIM

We've tried to incorporate in the building as many energy saving and recycling options as possible. We've got a rainwater harvesting system which supplies water to the toilets, we've got solar panels to heat the hot water in summer and we've got a biomass boiler because it gets rid of all the wood waste from the timber frame company, and heats the workspace in the units

COMMENTARY:

Tim's originally a woodworker and his business specialises in timber framed buildings – using locally-sourced wood with an environmental accreditation such as the Forest Stewardship Council certification.

TIM

It means that it's sourced from a sustainable source and there is a chain of custody so there's a paper trail from the mill to make sure it's been sourced from sustainable plantations, not just clear felled forest.

COMMENTARY:

One of the problems faced by architects and builders that want to work in this environmentally sensitive way is that the initial costs can be higher than more mainstream methods. How can their kind of ecologically sustainable construction compete to become the norm?

TIM

You've got to look at the pay-back time, so if the initial costs are more expensive but within three years you've saved on your heating bills or your electricity bills and the life-span of the building is 50 years well it's obviously a good investment.

TIM:

The building controls that regulate the house building process is getting more up to date in what is required to make a building sustainable and energy efficient so therefore house builders have been forced down a sustainable route.

COMMENTARY:

Tim's most recent commission is a timber framed building for a local government regeneration project, Tuckingmill Valley Park.

The initial cost was paid for by a government grant. It will serve as education centre and offices for the British Trust for Conservation Volunteers, who will in return help maintain the site – a former arsenic and gas works.

CAPTION:

Jon Mitchell
Kerrier District Council

JON:

we were very keen to show the project off as a centre of excellence, we want it to be not just excellence in conservation but also excellence in sustainability.

JON:

this building in particular with its turf roof, very good insulation so that the long term costs of putting in a building like this are going to be significant lower than a conventional build.

JON:

the insulation is all recycled materials. We tried to use a lot of recycling on the project even down to the flooring material such as linoleum and bamboo floor in the building.

COMMENTARY:

As it happens, this building was comparable in price to more conventional ones. But it has other advantages, from the council's point of view.

JON:

the capital cost and the revenue costs are very different,.... by putting in a building like this which is sustainable it will lower the long-term revenue costs and that's very important from the council's perspective.

COMMENTARY:

The shift to a more sustainable way of building like this can't just rely on committed pioneers. Civil society, the market, and the state all have to play a part.

JON:

there's two ways of doing it really for the government, there's either the carrot method of the stick method. This has certainly been the carrot method where people have been offered grants to deliver sustainable features as part of their work.

TIM:

I think what changes markets is the demand and I think the end users of buildings are going to demand more energy efficient housing because of the escalating price of energy

COMMENTARY:

These environmental pioneers have taken sustainability principles off the drawing board and applied them to their own projects. This doesn't mean they've found the answers for everyone, but they've learned how to ask the right questions.