



Innovation: designing for a sustainable future

Demonstrating sustainability in Scotland.

Narrator

This is the Findhorn Foundation eco-village, near Inverness in Scotland. Founded in 1970, the community is highly committed to more ecological ways of life.

Richard Coates

A big part of our philosophy is, as we say, to live lightly on the planet. Mankind has been abusing the planet and utilising resources and using more than it puts back.

John Talbot

In a practical way we're trying to convert what was a caravan park into ecologically sound houses, energy systems, water treatment systems, to demonstrate how we can actually live sustainably on the planet.

Narrator

The buildings are constructed as far as possible from sustainable and ethically sourced materials.

Richard Coates

Using materials that are renewable so we don't use hardwoods, we try to get materials from sources which aren't abusive in the way that they're produced, for example we buy steel from certain countries where the process is kind to the environment.

Narrator

The houses are designed to very high standards, even though many of them are self-build or self-finish constructions.

Richard Coates

If their plans, their architectural stuff gets through PPG, the planning group, it'll easily get through the local authorities because we have far higher standards of insulation, and breathing wall technology which is spreading round the world.

Narrator

Breathing walls allow air to circulate more quickly, producing healthier houses. Triple glazing and super-efficient insulation minimise heat losses. Low energy lamps and shared laundry and cooking facilities help reduce energy demand.

The community's energy needs are met by a mixture of renewable and fossil fuels.

A highly efficient gas fired condensing boiler supplies heat to many of the buildings in the community.

The site also has its own 75kW wind turbine.

John Talbot

Well currently this machine's been up and operating for almost 13 years and it's doing about 20percent of electrical needs, which is about 8 to 9 percent of the total energy requirements of the village. We're hoping to replace it with a larger machine within next year.

Narrator

The planned 850kW machine will supply up to 80 percent of their total energy needs.

The community uses innovative and environmentally friendly technology to deal with an inevitable by-product of any community – wastewater.

It's a Living Machine sewage treatment plant. As the water passes through the system of tanks, plants and bacteria use contaminants in the water as nutrients, producing water that's good enough to be used for irrigation, but not, as yet, for drinking.

Richard Coates

It's doing a natural process very naturally. It's producing water at the end of it; it's allowing the plants to grow. The plants naturally take the CO₂ out of the atmosphere like a forest does so you've got a tremendous cycle happening here which is good for the environment. In fact it's a win win win win situation.

It's new technology, its breaking new ground and we've been partially funded by the European Economic Community because they want to see how it works because they're obviously looking for ways that they can economically produce ways of dealing with things like sewage, water supplies and so on.

Narrator

But there's more to the community than sustainable buildings and Earth-friendly technology.

Richard Coates

And if you want to live lightly on the planet and be kind to the environment, that comes at a price because some of these houses are not particularly cheap, they're not grand mansions but we have to pay for the type of stuff we use. And it's not only about building, it's about having a way of life that's co-operative.

John Talbot

We want to include the other aspects of sustainability which are quite important. That's economic sustainability, it's social and cultural sustainability and also what we call spiritual sustainability.

Narrator

Community participation and involvement are an integral part of the project.

Richard Coates

The people that are moving here are people that are interested in being part of this experiment, you know can we demonstrate how to live sustainably; can we have a community that's benign and still life enhancing and fulfilling to be here? So that's the kind of people that are being attracted here, both in the local area and also nationally and internationally. We get a few people from Europe coming over and from the States as well.