Test of David Drewe's Presentation to Kyoto Local – Concern into Action – 13th July 2006, St Albans Abbey.

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Slide 1 - Good afternoon — eco-efficiency, sustainability, sustainable development the greening agenda, mean different things to different people and can cover a wide range of subjects and issues. in the time I have today I will consider just one area that many see as a core issue that needs to be dealt with that of energy and our use of it.

It is now widely accepted that climate change threatens major consequences to the UK and worldwide. The burning of fossil fuel with the resulting emissions of C02 has been identified as the main driver for climate change and the predicted increases in global surface temperatures. To offset the worst impacts of climate change a reversal of the current trends in energy consumption is required.

With buildings accounting for a large share of energy use this will require improvements to energy efficiency if the UK is to meet its emissions targets. churches are likely to be some of the most difficult to improve due to their size, construction and in many cases their heritage or architectural interest.

Slide 2 — To date most of the focus has been on improvements to business and domestic use with organisations such as the Carbon Trust and Energy Savings Trust taking a lead to encourage business to improve its performance. Other organisations have also made comments on the actions they see necessary if we are to meet our targets.

To date there has not been much interest in energy efficiency for Places of worship. And this even applies to the Government, the recent revisions to part L of the building regulations which deals with conservation of energy, exempts all Place of worship from the need to meet the requirements of part L.

Slide 3 — Before we look at church buildings I would just like to make an observation of my own. While energy is both a limited and valuable resources, and energy efficiency is an important issue what is not being considered in the rush to cut CO2 is the issue of resources management. Decision making, including how to meet our current and future energy needs, should not be made simple on energy efficiency. It needs to also consider the best long term sustainable solution for the use of resources and not based just on improved energy efficiency.

Slide 4— many however see the most pressing issue as a result of energy use, is the potential effects that may result from climate change. Increased flooding, higher extremes of summer temperature, increased storm frequency and water shortages are all impacts that it is predicted we will need to get use to in future years.

Slide 5 — so reductions in carbon emissions as a result of reduced energy consumption is seen as a priority. To some see the solution to cover buildings in new technology, such as solar and PV panel to save carbon, but we need to be sure that the materials and energy used to manufacture and maintain such systems is not in fact greater then the energy it intends to save. The answer is going to have to be a mix of solutions involving both technology and changes to our own lifestyle.

Although Kyoto only committed the UK to cut CO2 by 12.5% below 1990 levels, the UK government has set much higher goals.

In response to this some organisations have considered how we will achieve such reductions, the 40% house report carried our by the environmental change institute looked at possible actions required to achieve a reduction of 60% in our current energy use if we were to meet our 2050 targets.

Slide 6 — So it is good to see that the Church of England has launched its own initiative “SHRINKING THE FOOTPRINT” in an attempt to achieve the 40% church

Slide 7 — So what does the Church of England campaign entail?

It has identified the first challenge to be to lessen the energy load so reducing CO2 emissions by taking simple steps to reduce the consumption of non renewable energy resources achieved by following the shrinking the footprint path. The plan is to consider other issues such as biodiversity, waste and waste management, transport later.

So let’s have a brief look at these steps, and what see the sort of actions you are likely to be able to undertake.

Slide 8 - STEP 1 - It has been estimated that if everyone in the world consumed at the rate we do in the UK we would need at least 2 worlds to support our lifestyle. And that only if we continue at our current rate.

So the first step is to measure your current footprint, in other words what you use now, if you don’t measure you can’t manage. This is done by completing a simple energy audit form.

Slide 9 — STEP 2 — the second step is to use energy more efficiently. While it is not expected that we need to return to the past, we must all learn to use less energy and what we do use to do so as efficiently as possible.

The most obvious actions should be to the, check settings and operation of existing heating and lighting systems, are they being maintained to ensure they are operating as efficiently as possible. Are they on when it is not needed or left running when no one is in the building?

Over heating of many churches is not normally an issue, it is normally the opposite, so you are likely to get advice to improve a buildings thermal performance through additional insulation. While for many building such additions are possible this is likely to be difficult for many large church building, unless major works are being undertaken, but even here care is needed. While improvements are possible to roofs this is not the case with other major elements of the building, floors, windows and wall and caution is needed to the use of modern methods when dealing with older buildings that perform differently to those of more recent design. If you get it wrong this can lead to more problems then it solves. For example reducing ventilation can result in increased risks from mould, damp and health problems.

But that is not to say that improvements cannot be made, you should just make sure you get expert advice.

Slide 10 — Switch to green energy — applies only to grid connected electrical supplies and should be a fairly easy thing to do, although you may find that you pay a small premium for each unit of electricity used, shop around to find the best deal. Currently only about 3% — 5% of power is generated using green energy but the greater the interest the quicker will suppliers invest in the systems needed.

Slide 11 — Generate your own, this is the area where there is a lot of interest. Small scale wind generators, solar and PV panels, biomass heating boilers, heat pumps are all technologies that have the capacity to either generate or use renewable energy or reduce demand for energy.

In most cases you would not be using these in an attempt to save money; most systems are still costly and have long payback periods, some being longer then the expected life of the equipment. You would needs to accept to write off the initial capital cost and see this as your contribution to cutting carbon emissions.

They can of course be very useful for locations where mains gas/electrical supplies are not available. But make sure you get expert advice when considering such actions; also if you are looking at some of the bio fuels i.e. wood chip/pellets make sure you have a local reliable supply. Not much point having an eco fuel it is transported miles to get to you.

Some of these technologies are more established then others and all have advantages and disadvantages. For example wood based heating equipment tends to have higher flue temperatures so the use of existing chimneys and flues may not be possible or need improvements. Small scale wind generators need to be securely fixed, simple fixing to a wall or chimney may not be enough. Ground source heat pumps will need excavations, can your roof take the weight of the new solar or PV panels?

Planning may also be an issue, although a recent Act — Climate change and sustainable energy — looks to widen current permitted development to include.

Slide 12 — Offsetting — I am pleased to read that the advice is that this is a last option. There are many schemes that one can sign up to but to me they should be called offloading not offsetting. Many of these schemes are based on trading your carbon emissions in some way. At its simplest you pay someone to carry out some form of action, i.e. planting trees, to deal with the emissions that you have produced. The problem to me is that this appears to give those who can afford it the right to pollute.

Slide 13— Review as with any good management process the last step is to look back at what you have done, decide have effective it was and see what you can still do to improve

Slide 14 — so in summary adapt the KISS principle. Do the simple things first and consider the wider implications of more complex solutions, keep a conscience when deciding you actions and try and evaluate the total energy cost of improvements.