

## **Sussex Heritage Trust**

### **A Statement on the Trust's Approach to Renewable Energy March 2015**

#### **Introduction**

The desirability of reducing carbon emissions throughout the world is an important issue with (if worst case scenarios are to be believed) important consequences for mankind if they are not reduced.

In the light of this and with the Trust's stated aims of caring in particular for the built environment in East and West Sussex and the visual quality of both sides of this large and beautiful county, we feel it appropriate to state our views on the various approaches to achieving this reduction in carbon emissions.

#### **Buildings**

The buildings we live in currently account for some 26% of the total UK carbon emissions and taken across the country a fifth of our dwellings were built before 1919 with a much higher proportion likely in Sussex. It is vitally important that this element in the future energy equation is tackled now as part of an overall approach.

#### **Insulation**

By far the most effectual way of reducing energy consumption, certainly in domestic buildings and in buildings generally, is to increase greatly the insulation both of new buildings being constructed and by applying insulation more thoroughly to existing buildings. This has been a policy for some years, through the vehicle of Buildings Regulations. We believe the levels of insulation to all elements of buildings, i.e., roof, walls, floors, fenestration etc., should be considerably increased, thus reducing the need for so much energy in the first place, due to buildings being warm in winter and cool in summer, as a result of being properly insulated. This is already the case in countries which have less temperate climates than our own, such as Scandinavia, Canada etc., where winters are very cold and often very long requiring maximum insulation, and where insulation is affordable because it is so critical. It could and should also be the case here in the British Isles.

Such an approach is applicable not only to new buildings and existing buildings but also to listed buildings, where subject to suitable professional expertise, considerable thermal and comfort improvements can be achieved.

#### **Electric Vehicles**

Technological advances in battery design and fuel storage for electric cars are to be welcomed. It should become a requirement in the Building Regulations for all new builds to provide suitable charging points for electric vehicles.

#### **Alternative sources of energy for both domestic and commercial buildings.**

##### **Solar Panels**

For many people solar panels, both to produce hot water or electricity, are the most common example of alternative energy provision. If solar panels are to be used they should, in general, not be located on pitched roofs where they are visible, either from the built environment or from the landscape itself.

Roof forms in landscape and townscape make up a most important part of our appreciation of the particular nature of each county in England, whether it be the slate roofs of Yorkshire or the interlocking red pantiles of Suffolk and Norfolk and their steeply pitched gabled roofs, or handmade clay plain tiled roofs of the South of England, in particular Sussex with their hipped and half hipped generous roof forms, which are such a delightful feature of the county. Covered with solar panels they lose all their inherent beauty and affinity with their location.

It is our view that solar panels should be used only where they are not immediately visible, or can be hidden in double pitched roofs, not on main elevations and the area to be provided together with the way in which any panel sits within the roof needs to be carefully considered.

Alternatively, solar panels can be used remotely and screened by landscaping or other means from harming the visual environment. There may be a slight loss in efficiency when the energy is transferred from the remote location to the building, but this will in time be remedied by technology, and does not, in our view justify the massive visual harm done by the current policy of allowing solar panels on any roof facing the direction of the sun, regardless of its visual impact on the building itself and the general environment.

The Trust will support relatively small discrete developments on the roofs of existing buildings, or in other sites where they are effectively concealed by existing development or the lie of the land. It is also important that the extent of the panels to be provided and the way in which they sit within the roof plane is considered.

There are, however, commercially available photovoltaic ‘slates’ which might be used to good effect, particularly in areas where slate roofing is part of the local vernacular. An example of this is shown below. We commend the contemporary extension to a traditional flint barn at Brooks Lodge, Piddinghoe which received a Sussex Heritage Trust award in 2013 and has an inconspicuous photovoltaic slate system.



Chapel Barn, Brooks Lodge, Piddinghoe (Photo Credit: Pfeiffer Design)

## Heat Pumps

There are many forms of renewable energy such as ground-source and air-source heat pumps etc. and we would encourage the use of these approaches wherever possible, with the proviso that the visual and acoustic impact on the very special qualities of Sussex as a whole are kept to the absolute minimum.

## **Biomass**

There have been significant technological advances in biomass boiler design in recent years resulting in boiler efficiency levels of 90%+. They are best suited to large district heating schemes or large building complexes with large air volumes and heating demand. The Trust particularly welcomes schemes that use locally-sourced fuel wood. Bio mass fuel production can result in large scale single species agriculture that could be a significant change in the relatively small scale field patterns and texture of our Sussex landscape. However, it can also bring back long neglected coppice woodlands into a sustainable cycle of management and production which also benefits woodland flora and fauna.

## **Cleaner energy**

In order to meet our carbon emission targets, it is anticipated that more of our energy needs will be met by electricity and cleaner sources of energy are being developed including wind and solar. The large scale provision of clean energy by these means could have a significant and lasting effect on the landscape of Sussex.

## **Wind Turbines**

We believe wind turbines, particularly when grouped together in wind farms, should **not** be located on land, but rather out to sea where visual damage is minimal. Ideally they would be located on sites sufficiently far from land as to be barely visible from land, creating the least amount of visual harm. There may be a case for single turbines to be provided but these need to be carefully considered both from a visual and acoustic point of view and on a case by case basis.

## **Solar Farms**

The Trust believes that while renewable energy is desirable, it should not be at an unacceptable cost to the countryside or to the economy. Except in very discrete areas which cannot easily be seen, such as worked out gravel pits, the Trust is opposed in principle to solar farms for the damage they do to the countryside and landscape, particularly in the South Downs National Park and Areas of Outstanding Natural Beauty (AONBs) and the Green Belt. We do not consider that the minimal benefit they offer in terms of renewable energy is sufficient to offset the environmental harm they create or the otherwise useful land that is lost.