Actio$_2$n Surrey
SURREY'S LOW CARBON COMMUNITY

The Global-Local Context

Why reduce energy consumption?

Energy security

The International Energy Agency's World Energy Outlook report 2009 stated that world energy demand is set to increase by 50% between now and 2050. This means that global competition for energy sources will intensify potentially pushing up the price we pay for energy. In October of 2009, Ofgem released a report claiming that UK energy prices will rise by up to 25% BY 2020. The volatility of energy prices is also expected to be exacerbated. In the UK price spikes are predicted to increase by 60% in some instances (Ofgem, 2009). This trend is certainly set to continue with fossil fuels becoming increasingly concentrated in politically unstable parts of the world. Making your home as energy efficient as possible can help protect you from energy price rises.

Climate Change

The science on human-induced climate change is now fairly well established. The Stern Report and the Intergovernmental Panel on Climate Change both concluded that global green house gas emissions must be stabilized urgently and begin to be reduced over the next few decades if we are to avoid a potentially catastrophic 2°C rise in global temperature. A 2°C rise in global temperatures could give rise to a number of serious global environmental problems such as; rising sea levels (increased 'climate change refugees'), spread of diseases such as malaria, 15-40% of all species facing extinction, loss of coral reefs which support fish stocks and provide raw ingredients for medicine, regional crop failure leading to rising food prices, increased intensity of storms and unexpected weather events such as flash flooding, drought and storms.

Approximately 27% of the UK's CO_2 emissions come from domestic houses, with a very large proportion of this resulting from heating and lighting our homes—so we all have our part to play in

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rising to this challenge.

On a local level...For the South East of England it is predicted that over the next 80 years there will be an increase in average annual temperatures of between 2.0 - 2.50 C and 4.0 - 4.50 C and decreases in annual average rainfall of 0 - 10% This masks seasonal variations predicted – wetter winters and drier summers with rain increasing by 20% in winter and a decrease of between 8% - 23% in summer. So we can expect a changing pattern of more extreme weather with floods, and droughts becoming "normal".

It's an undeniable fact that for the past few autumns in the UK – our own Borough included – people have had to struggle against hurricane force winds, fallen trees and floods that have devastated homes, schools and businesses. Extreme events such as these are expected to become more frequent.

Why reduce water consumption?

World Water Demand

Water is considered by many to be a finite resource that must be shared by the World's growing human population. During the 20th century the World's population has increased four-times over but water consumption has increased nine-times over. This trend is set to continue resulting in almost half of the World's population living in areas of high water stress by 2030. Global agriculture is dependent upon having access to water. With an increase in water shortages all countries can expect to experience an increase in food prices and for many, an increase in import dependency.

Water consumption in the UK and Woking

Despite the weather, the UK actually has less water available per person than Sudan or Syria. Yet 1/3 of the water that we consume is wasted. Data from Three Valleys Water also confirms that average daily water consumption in Woking is approximately 170 litres/person/day, which is considerably higher than the average household in England and Wales of 150 litres/person/day.

Waterwise, the leading UK water charity conducted research into the associated carbon emissions with pumping, treating and heating the water used in a family home over a year—they concluded that it equates to the same emissions that would result from a return flight to New York (approximate 1.5 tones of CO_2). However, saving water will not only save 'the environment' if you are on a water meter, it will save you money too.

Embodied water

In addition to the water we use directly, water is also embodied in the products that we buy. If this is all accounted for the average UK resident actually uses around 3,400 litres of water every day.

So what can we do?

One of the most effective ways to minimise our environmental impact and reduce our CO_2 emissions is by reducing the energy and water consumption in the home. This pack is the first step helping you to tread lightly, save money and make your house a low carbon home!