

The Worshipful Company of Water Conservators.



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Embedded Water – the invisible issue?

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For many people environmental issues are now part of everyday thinking and action; the quantity of waste recycling has increased, so too has the number of people using public transport. Air quality is becoming such a matter of concern that speed limits on motorways are being reduced in order to improve air quality. Environmental concerns are clearly having a real impact on all our lives.

Although there remains a lack of consensus on the issue of ‘climate change’, the increasing number of extreme weather events in the south of the UK this winter suggests that it is having a real impact. The media gave the extended sequence of storms, heavy rain and flooding intensive coverage for a short time, but it is rare that such attention is paid to water, in particular to the high quality product that flows from the taps in our homes and work places.

Water is cheap, probably too cheap. There are few incentives to save it and we are careless when using it; even the companies responsible for providing it allow a significant proportion of their product to be lost before it reaches their customers. We forget the effort and energy needed to make water of a potable quality and then to deliver it to every house in the land.

Reducing water consumption is laudable but while it is cheap, and the charge for it is not linked to the quantity used, there is no incentive to save. Domestic metering is helping in this respect and water companies are working hard to help customers save water (and energy) by offering flexible approaches to metering.

In industry, water is used in even larger volumes, but by the time industry’s products reach the consumer, the water used in their production is forgotten. Soft drinks manufacturers, for example, are seeking to reduce the amount of water needed to make their product. They will provide examples of manufacturing facilities where they have moved the ratio of water to finished product from 2:1, then 1.8 : 1 and on to 1.2 :1 and in the most modern facilities 1:1. This is great progress that should be applauded, but they will then acknowledge that this only covers the water used within the manufacturing facility and not that used in growing, processing or transporting the raw materials to the manufacturing facility. The total water used, the so-called “embedded water” is much greater than is apparent.

Agriculture is a huge consumer of water but in many places, such as California, there are insufficient supplies to feed the irrigation systems that agriculture requires. Heavy industries too are large consumers of water; figures for the water required to make a tonne of steel range from 70 tonnes to more than 200 tonnes, depending upon the process and degree of re-use and re-cycling.

Simply, the scale of the “embedded water” contained in the things we consume is invisible and unrecognised. Who and what will bring this issue to the public’s attention? If climate change is going to

result in drought and long periods of hot weather, as has happened in Australia in recent years, will the requirement to reduce water use in industry and agriculture be the next major concern? Will the public only appreciate the true value of water when drought impacts on food production?

As the global population grows and many become wealthier, the consumption of manufactured goods will increase quickly. This will bring with it an increase in the demand for clean water. Can that demand be met and is that supply sustainable?

It is here that the **Worshipful Company of Water Conservators** should lead the way. We should use our collective resources and knowledge to understand the issue better. We need to use our contacts to present our message clearly and widely and, most important of all, we must help develop sustainable solutions.
