

BRIEFING NOTES:

## **A brief summary of the arguments against PVC windows**

2005



*I wrote these a few months ago so that we could be better armed when clients start suggesting uPVC windows. Most of the environmental points apply equally to other uses of PVC, though; membranes, furniture, upholstery, even cable insulation.*

- 1. Economic**
- 2. Aesthetic**
- 3. Environmental**

### **1.0 Economic**

- 1.1** On refurbishment jobs, it usually costs as much to get uPVC as to completely overhaul timber (to similar draught and noise performance) with some left over for maintenance for many years.
- 1.2** On new build, timber is often a similar price for similar performance, with none of the built-in obsolescence of uPVC.
- 1.3** Properly looked after, we know that good timber windows can last 200 years or more. uPVC life is fundamentally limited to 20 years or so, barring irreparable damage earlier.
- 1.4** uPVC windows and doors cannot be adapted, altered or repaired; if, in ten years' time, the client wants a door narrowed, or hung on the other stile, or if the locking breaks, it normally means a whole new unit.

### **2.0 Aesthetic**

- 2.1** uPVC is quite a weak material and requires much thicker sections for the same job – it always looks too heavy.
- 2.2** 'Small frame' style dividers in uPVC are never convincing because they are between the sheets of glass – they look like the tack-on they are.
- 2.3** uPVC cannot be redecorated so
  - a) the available colours are very limited
  - b) as it degrades under exposure, losing its high gloss, uPVC starts to support fungal/algae growth and looks tatty. It is very difficult to prevent this or treat it.
- 2.4** Because of their heavy appearance, uPVC windows often have an adverse effect on the resale value of larger or historic houses.

### **3.0 Environmental**

- 3.1** The production process for uPVC tends to result in the release of various pollutants. Of these, the most damaging are dichloroethylene and vinyl chloride, both of which are mutagenic. The industry is working hard to reduce this problem but organic chloride waste products are still an issue.
- 3.2** If uPVC is involved in a fire, it gives off deadly combustion products, including dioxins and furans. These are some of the most toxic substances known; they are highly carcinogenic and are believed to act as hormone disrupters. The fire brigades' union has been campaigning for many years for legislation against uPVC on these grounds in order to protect both its members and the victims of fires. In Germany, anything which has come into contact with the smoke of uPVC fires has to be treated as toxic waste and safely disposed of, at huge expense.
- 3.3** Timber production, on the other hand, is generally an environmentally positive process. Apart from some tropical hardwoods and some North American or Siberian softwoods, the process is sustainable with more trees being planted in many countries (including the UK and Scandinavia) than are being harvested. The growth of timber works in opposition to the greenhouse effect by consuming carbon dioxide and producing oxygen.

