

# Protecting & beautifying

## ENVIRONMENTAL BRIEF

**P<sub>b</sub>** Lead sheet adorns cathedrals, palaces, opera houses, monuments and many of the homes in which we live. For centuries, its malleability and durability have made it the roofing material most favoured by skilled craftsmen in Europe and North America.

**P<sub>b</sub>** A thriving lead sheet industry creates employment for thousands of people and helps keep alive the traditional arts of construction which have given Europe some of the most beautiful buildings in the world. Lead sheet is important to the work of architects, building conservationists, quantity surveyors, roofers and other skilled craftsmen.

**P<sub>b</sub>** So much for lead sheet's contribution to the *built* environment. But what impact does it have on the Environment beyond?

### **A naturally occurring mineral...**

**P<sub>b</sub>** Lead is a natural metal - the earth's crust contains 290 million tons of lead.

### **Energy efficient and totally recyclable...**

**P<sub>b</sub>** Lead is soft and malleable. As a result, the energy required to form the metal into sheet is low compared with other materials.

The lead recycling process is also energy efficient. Because lead has a very low melting point of 620 degrees Fahrenheit, little energy is

required to recycle and convert scrap lead sheet into new product.

**P<sub>b</sub>** Lead sheet can be recycled indefinitely, without losing its quality. In fact, more than 95% of lead used for building purposes is recycled.



**P<sub>b</sub>** And while all metals corrode, lead resists far better than others. Indeed, as a roofing material, lead sheet lasts a very long time - for 200 years and more when fitted properly. It requires little, if any, maintenance.

**P<sub>b</sub>** Less durable materials that need to be maintained or replaced regularly use up more of the earth's resources and create more energy demands over the long-term.



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## Minimal discharges...

**P<sub>b</sub>** As with all building materials, minute quantities of lead will leave the roof during its life time. Yet, unlike many other metals and minerals, lead discharges are rapidly rendered inert through binding to soil particles or to sediment in water courses. "Bio-availability" within the eco-system is thus extremely limited.

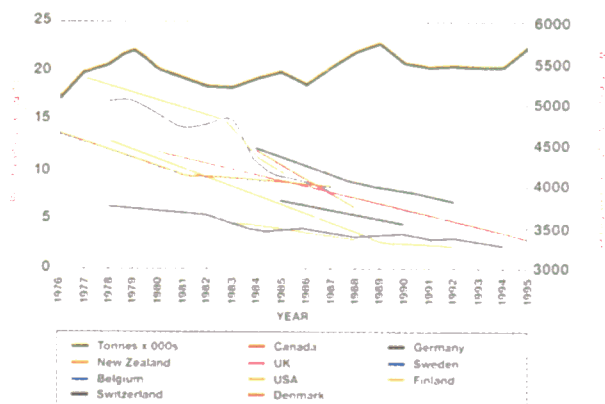
**P<sub>b</sub>** The consumption of lead, both for sheet and other uses, such as batteries for electrical vehicles, has remained buoyant over recent years. However, average blood levels have been reduced dramatically and continue to fall as illustrated below.



**P<sub>b</sub>** Studies by European environmental institutes show that synthetic materials developed as an alternative to lead sheet can have a significant global warming impact during manufacture. Climate change is now recognised as one of the biggest single threats to the environment worldwide.

## Blood lead surveys versus world lead consumption

The surveys covered a wide cross section of the population at different locations and in 10 separate countries



## Helping to ensure sustainable Development

**P<sub>b</sub>** Governments throughout Europe and North America are putting sustainable development at the heart of their environmental agenda. By maximizing recycling, minimizing waste and through sheer longevity, lead sheet is difficult to better as an example of a sustainable building material.

