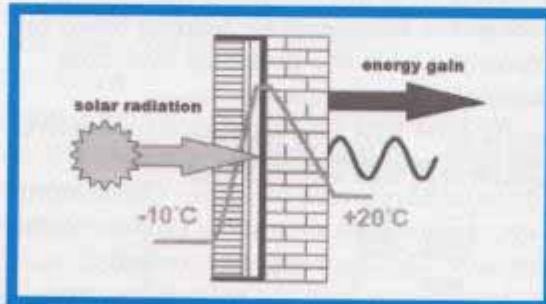


most of our old houses and build new, energy-efficient ones. No one is seriously considering implementing this policy, which would destroy many beautiful buildings, play havoc with planning and have an unacceptable financial cost; but it is necessary to face facts: our Victorian housing stock is at present damaging the planet.

Victorian walls

There are various ways in which this harm can be mitigated, at least to some degree. Internal insulating wall-coverings have been around for some time, and have improved in recent years. Taking this idea a little further, it is possible, as long as the room is not too

The trombe wall concept – an additional glass wall just outside the bricks creates a warm air gap, like a mini-conservatory.



small, to batten a false wall inside the existing walls and fill that with insulation, though obviously this leads to the loss of a few inches of space in the room. There are also some external renders that claim to add to the insulation of the walls. Compared to the huge thermal mass or fully insulated deep cavity in more modern buildings, however, these solutions are fairly inconsequential. How are we going to retain our varied historical housing, but

halt the squandering of energy for which they are responsible?

The trombe wall

One possibility is the development of the idea of the trombe wall, named after the French inventor, Felix Trombe, who developed the technology in the 1950s. This is, in effect, the creation of a warm air gap between the external wall and a further glass wall a few millimetres to the outside. In other words, it is an extension of the lean-to conservatory technology.

Direct sun can provide as much as one and a half kilowatts of power per square metre, though most of this is not harnessed. The glass increases the amount by which the sun's radiant heat warms the wall during the day, and this warmth is stored in the masonry wall to be released slowly into the house during the evening and night. In addition, cool air is vented out of the room and into the bottom of the glazed area and the warm air that rises is vented back into the room, at the top.

It is unlikely that trombe walls will be fitted to many buildings, and the technology is in any case not yet perfect. What other solutions can architects and builders come up with to tackle this problem? If a solution could be found, it would be worth the Government investing millions of pounds in grants to have the technology fitted to all old houses, as the saving, both in environmental and financial terms would be huge.