



Centre for
Alternative
Technology

CONSERVATORIES

Information Service, Centre for Alternative Technology, Machynlleth, Powys, SY20 9AZ.
Tel: 0845 3308373 or 01654 705989 e-mail: info@cat.org.uk
For more information sheets, see our web site: www.cat.org.uk/information

A conservatory can be a great way to use solar power. And as well as saving energy, it will provide a pleasant extra room. The big thing to remember is that a conservatory should never be heated - or all the benefits will be lost!

How can a conservatory conserve energy?

A conservatory is a 'buffer' against the outside weather - the temperature will stay a few degrees warmer than it is outside. For much of the year a conservatory is a very nice place to be. However, you'll need blinds or shutters to prevent overheating in high summer. Growing seasonal vines or creepers across the roof is also a great way to get summer shading. A south-east facing conservatory is ideal, as it gains from the morning sun but will be slightly shaded from the westerly sun at the warmest time of day.

A conservatory can also act as a lobby for coming and going from the house. This reduces the draughts and heat loss that normally happens when external doors are opened. Fresh air coming in to the house via the conservatory will be warmed on its way through. This is good, because lots of the heat loss from a well-insulated house is through ventilation.

But if I just added a little heater...

The danger with conservatories is that they come to be relied upon as an extra living space in the home. As the coldest months come around, a few degrees above outdoor temperatures is still quite chilly. Unfortunately, UK Building

Regulations do not prohibit people from heating a conservatory, they just require that any heating be controlled separately from the main house heating system.

This leads to the temptation of putting a heater or radiator in, a move that would make your home an energy guzzler! It is impossible to insulate a mostly glazed building sufficiently, so you need to stand firm and keep it unheated.

Keeping the heat in

Shutting the conservatory off from the main part of the house with solid doors, or glass doors with thick curtains, will stop heat escaping at the coldest times of the year.

Plenty of 'thermal mass' within the conservatory will store the heat gained for longer. So if it is being added to an existing brick wall, much of this could be kept for this purpose. Alternatively, a solid stone or brick floor will soak up and then slowly release heat as the evening cools down.

For a sunny but heated space in your home, consider instead a sun-room. This would have double glazing throughout with an insulated solid roof and well-insulated curtains or blinds. An insulated, heated sunroom would need to meet Building Regulations, so the balance of windows and insulated roof or walls would need to be designed carefully.

A conservatory may seem cheaper to build than a proper extension, but this is not always the case - they can be more costly per square metre than the rest of

the house! And if it ends up as a heated room then the less obvious heating costs will not be at all cheap.

Construction detail

By employing a joiner who is FENSA registered (Fenestration Self Assessment Scheme) you will not need to have the glazing work checked by Building Control. Instead, the installer will issue you and the local council with a certificate to show that the windows or doors comply with Part L of the Building Regulations. See www.fensa.org.uk

The conservatory on the Whole Home at CAT was designed by CAT staff, with the technical plans drawn up by an architect who specialises in timber frame building. The window units were made by local joiners, using double-glazed panels, and we hired a local contractor to build the conservatory.

Further Information / Contacts

For more detailed advice on adding conservatories and sunspaces to your home, as well as lots more information on eco-building and renovating, see CAT's flagship publication, **The Whole House Book**. This is a complete reference guide for self-builders and architects, giving comprehensive advice on choosing materials and designing a healthy, efficient and low-impact home.

Many other books giving more detail about passive solar design techniques such as conservatories are available from **CAT Mail Order**:

Tel: 01654 705959 / 0845 330 4592

Web: <http://store.cat.org.uk>

CAT runs several **residential courses**, including some looking at adapting your house to make best use of solar gains.

Tel: 01654 704652

Web: www.cat.org.uk/shortcourses

You can contact **CAT's Information Service** with any further questions.

Tel: 01654 705989;

email: info@cat.org.uk

For further in-depth technical advice, many people find it useful to run through their plans with our experts. For details of **CAT Consultancy**, see www.cat.org.uk/consultancy

You can find details of environmentally aware building contractors through the **Association for Environment Conscious Building (AECB)**.

Tel: 0845 456 9773; www.aecb.net

Forest Stewardship Council

Certify that timber is from environmentally and socially sustainable sources. Look for the FSC logo or contact them for suppliers.

Tel: 01686 413916; www.fsc-uk.org

