

## Guidance note 16A

# Behavioural Change and Solar Shading

### Introduction

Behavioural change is a key part of the UK strategy to reach its environmental and energy saving targets.

With energy prices increasing and set to increase further in the future the only way for homeowners and businesses to save money on energy is to change the way we use it—that is behavioural change.

**A building's energy consumption can be reduced by up to 10% just through behavioural change therefore at no extra cost.**

Carbon Trust, (2011)

When energy was cheap and plentiful we did not think of how we should use the everyday things that could save energy. Blinds are still thought of as the decoration at the window but should be part of an energy saving strategy. By adopting the BBSA best practice on shading you will quickly realise how they will also save you energy and money.

Blinds and shutters can work to save energy irrespective of the season. In the summer they can reduce heat gain and in winter they can reduce heat lost through window systems.



### **The BBSA best practice on using solar shading to maximise energy savings**

- **In summer close the blinds at night on the east and south-east elevations to protect from early morning heat gains**
- **In summer open the blinds at night on the west and north-west elevations to assist night time cooling**
- **In winter close the blinds after the sun goes down to retain heat**
- **In winter on sunny days open the blinds to maximise the heat gains from the winter sun**
- **Blinds in unoccupied rooms should be closed**

## Summer cooling with blinds and shutters

When you go on holiday to say Italy or Spain you close the shutters on your hotel window in the early morning and then later in the day the room is a cool refuge from the afternoon sun. It is a natural, efficient method of cooling a room without using energy.

The best way of minimising heat from the sun is to use nature and plant trees outside your windows. In the summer the leaves shade, like the shutter, and in autumn the loss of leaves will allow the sun to penetrate and provide some natural winter heating even when temperatures outside are lower. Totally efficient and it does not cost a penny.

In the UK it also gets hot in the summer. Traditionally we have preferred large areas of glass that need air-conditioning to cool the resulting heat gain in offices or fans in our homes rather than utilising passive cooling methods such as natural shading.

Using your new or existing blinds to the BBSA best practice on shading will work in the same way as the shutters and trees.

## Winter heat saving with blinds and shutters

A significant amount of heat can be lost from a building through its windows especially during the cold winter months. Also, in the winter you want to maximise heat gains from the low angle sun. Blinds and shutters can work to reduce the amount of heat lost but also because they can be raised they can be used to maximise the solar energy entering the building when it shines.

In commercial buildings this can mean that less heating is required in the morning to get the building to a comfortable temperature. In domestic buildings this means you can spend less money on your heating bills.

## Behavioural change in action

One **BBSA member** installed reflective blinds in a domestic building along with advice to the owner that if you close the blinds in winter you will reduce heat loss, keep the heat in and save energy. The owner monitored his central heating carefully and found that after having the blinds installed he was able to switch his heating on an hour later than usual therefore saving energy and money.

In the USA a number of schools have been using behavioural change techniques to save energy and money. Savings were made through techniques such as switching computers off, regulating their energy use on heating and cooling through monitoring and **closing the blinds**. After two years of behavioural change/energy conservation measures 11 schools had **saved £435,000** on their energy bills.



Close the blinds

**SHADE**  
SPECIFIER

 **Climate**  
21-27 March  
2011 **Week**



Turn down the lights

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