

CIBSE Briefing

Keeping cool in a heatwave: top tips for facilities managers

These tips can all help to keep the workplace cooler and more comfortable in hot weather. Some can be easily implemented, others may need consultation or management investment. An accompanying document provides guidance for building users and can be downloaded and circulated to staff: www.cibse.org/content/heatwavebriefing2.pdf

Communicate with building users

- Tell building users what you are doing to make them more comfortable, and ask for their help to keep the building cool:
 - Circulate a simple note annually outlining how the building will be managed in hot weather. Repeat the process during very warm weather as a reminder.
 - Provide the building users with a short, simple action list – for example to keep windows in air-conditioned spaces closed, to open blinds again in the evening before leaving for home or open secure ventilators etc.
- Listen to users and treat feedback positively. Building users will feel much happier if they feel complaints are taken seriously, so provide a way for comfort problems to be reported and logged. Always acknowledge them and tell them what you plan to do. Use complaints received the previous year to help identify specific building hot spots or indicate possible improvements.

Reduce internal gains

- Check that the heating is switched off, especially during hot spells in the spring or autumn. If heating is still required in some areas check that where there are radiators the thermostatic valves are closed in areas that are overheating. If relying on local control be aware that there can still be considerable heat output from the distribution pipework even when the thermostatic valves (TRVs) are closed.
- Audit/review the location and type of heat and/or moisture producing equipment such as printers, copiers, ovens, microwaves etc. Consider if these can be reduced in number or moved away from work stations into central locations, preferably with local ventilation to remove heat at source.
- Check that unnecessary lights and equipment are switched off (not left on standby if possible) when not in use, particularly overnight. Inform and remind staff about this. Heat reduction and energy savings may be possible even for equipment in regular use if it is switched off between uses rather than left on standby.



Windows, blinds and ventilation

- External shading of windows is the most effective way to reduce solar heat gains, but internal shading also helps. Therefore, any blinds, curtains or shutters that are fitted should be closed when it is hot and sunny. If they are opened in the evening to allow cool air to enter unimpeded overnight, they should be closed again early in the morning. Blinds with feathered slats will allow better ventilation when the window behind them is open.
- If the workplace is not air conditioned, then having the windows open can reduce the build up of humidity and increase air movement.
 - Open the windows early and late when it is cooler outside but during the middle of the day, or when it is hotter outside, have them closed.
 - You will get more air movement if windows on both sides of the building are open as this encourages cross-flow ventilation.
 - In windy conditions it is better to open all the windows a little rather than open a few wide.
 - Smaller opening panes can give more draft-free ventilation.
 - Trickle vents can help increase ventilation.
 - Consider the removal of secondary glazing panels, where fitted, to help improve ventilation. Ensure they are replaced when summer ends.
- Portable or desk fans increase air movement and give a local cooling effect where there is no air conditioning.
 - Where free-standing fans are provided to improve general air circulation, and the temperature outside the building is lower than that inside, where possible site the fans in front of open windows to draw cooler air in from outside and blow it across the office.
 - Local desk fans should be switched off when users are away from their desks, as heat from the fan motor warms the space.
- Night-time ventilation to provide cooling can be beneficial as long as security is not compromised.
 - Discuss and agree with management the security strategy needed to provide adequate night-time ventilation.
 - Leaving windows on upper floors open securely can help cool the building fabric, particularly if they can be open on opposite sides of the building to give cross-flow ventilation. Consider changing window opening mechanisms so that the windows can be locked securely in an open position. (Note that intruder sensors need to be heat rather than



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movement sensitive so that if it is breezy at night and the windows are open the alarms will not be activated.)

- Use fans to draw cool air in at night if the outdoor temperature is below the indoor temperature. If there are existing mechanical ventilation systems it can be beneficial for these to run overnight to cool down the building fabric before occupation.
- Leave secure trickle ventilators open at night.
- Provide local control wherever possible.

Efficient air conditioning

- If the workplace is air conditioned, inform staff of the need to close doors and windows so the air conditioning can work efficiently.
- In very hot conditions, consider setting up a cool room(s) with one or two air conditioning units for staff use during breaks. Ensure that the heat rejection hoses for the units are positioned so that hot air does not re-enter the building.

Staff comfort

- Ensure everyone has access to cool drinking water / warm drinks.
- Request or review specific assessments for those who may be vulnerable during periods of hot weather.



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