

## Internal Heating and Cooling Policy on the University's estate

### 1. Introduction

This document details the University of Kent's Policy with regard heating and cooling of rooms in University buildings. The Policy sets out guideline temperatures for heating and cooling.

Energy costs are rising significantly; the University's utility expenditure is now over £3.9M per year. The University is committed to reducing carbon emissions year on year and this document supports our target of a 23% reduction by 2020 compared to the 2005 baseline year. A new carbon management plan will be published in 2020 with a revised University target for carbon reduction.

The provision of heating and cooling in University buildings is primarily centrally controlled by the Building Management System (BMS), managed by the Estates Department. This controls time schedules and temperature for the heating and cooling systems within buildings. There are some local controls including thermostatic radiator valves which are best set at mid-range to give a temperature of 19-21C in the space.

### 2. Heating

#### 2.1. Heating

- The University will endeavour to maintain winter working time space temperatures of between 19°C and 21°C in all its buildings except for areas not used as an office, accommodation or teaching space (i.e. workshops, plant rooms, staircases etc.).
- The heating season generally runs from the start of Welcome week (mid-September) through to the end of the final term (mid-June).
- Heating is provided in summer, as required, for examination rooms.
- When the outside air temperature exceeds 16 deg C the BMS will automatically turn heating systems off in buildings.
- The buildings have time schedules based on their general use. If heating is required out of hours this can be requested via the Estates Customer Services Desk [estatescustomerservices@kent.ac.uk](mailto:estatescustomerservices@kent.ac.uk).

#### 2.2 Portable electric heaters

The use of portable electric heaters is strongly discouraged, for health and safety reasons, running costs and environmental impact. In many areas, portable heaters may also interfere with the Building Management System affecting the heating in other parts of the building and the comfort of other users.

Estates will control the use of any electric heaters that are issued since this has a significant bearing on the electrical loads of a building and capacity to supply heating in this way. Overloading the building capacity may result in power outages.

When a request for an electric heater is received by the Estates Department's Customer Services team, then the following steps will be implemented by Maintenance:

- 1) The area will be checked to see if the area being reported as cold is in an area where works are being carried and as part of these works it has been necessary to turn the heating off locally. If this is the case then an electric heater(s) may be provided until the central heating is restored.
- 2) The Building Management System (BMS) will be checked to see if the area is being heated to a temperature of 19C. If possible make adjustments to the heating system on the BMS as necessary and notify the user.
- 3) If neither of the above points apply arrange for the heating system to be checked locally by the Maintenance section and repaired as necessary. (As part of checking the space note if windows are observed left open
- 4) If none of the above actions address the issue, then maintenance will arrange for a temperature logger to be placed in the space to monitor the space temperature and the local heating appliances to check operational temperatures. If the temperature at the start of the working day and/or during occupancy is less than 19C then a portable electric heater may be provided.

Where portable heaters are required, the following are **mandatory**:

- Estates must agree to their introduction (contact Estates Customer Services in the first instance – ext. 16666 or [estatescustomerservices@kent.ac.uk](mailto:estatescustomerservices@kent.ac.uk))
- The appropriate type must be chosen and care must be taken regarding fire and general safety

For further guidance on selection and use of portable heaters please see:

[https://www.kent.ac.uk/safety/hs/pages/portable\\_heaters/portable\\_heaters.html](https://www.kent.ac.uk/safety/hs/pages/portable_heaters/portable_heaters.html)

## 2.3 Outdoor Heaters

The use of outdoor heaters is not permitted on the University's campuses.

# 3. Cooling

## 3.1. Cooling

The University aims to minimise the provision and use of air conditioning/cooling both in terms of installation and use. The supply and use of air-conditioning/cooling in rooms results in greater energy use, since electrical fan power is expensive with increased carbon emissions and increased running costs (Electricity is 3 times more expensive than gas; cooling systems will be strictly controlled by the Estates Department. Furthermore, these systems contain F-Gases, if the systems leak this will have a global warming potential several times that of carbon dioxide.

There is no legal maximum temperature for occupied spaces.

The provision of air-conditioning units is permitted, but not necessarily required, for:

- Computer suites and server rooms
- Research laboratories or research area's that require close control
- Areas that may enhance the students experience at the University of Kent

Note while the above are permitted, the design of new University buildings now includes improved natural ventilation to either reduce, or eliminate completely the requirement for cooling even in these areas.

Where air conditioning is already installed the space temperature should be set no lower than 25°C and the system set to provide cooling only when the space is occupied. All doors and windows of the conditioned space should remain closed and any heating should be off.

During hot summer conditions there are several options that can help to reduce the effect of the warmer temperatures:

- Make use of window blinds and curtains in hot weather to reduce solar gain.
- Switch off unnecessary electrical equipment and lighting particularly in summer as these can contribute significantly to heat gains.
- Dress appropriately for the weather.
- Increase air movement in the space by opening windows and requesting fans from the Estates Customer Service Desk.
- Where possible make use of flexible work times where appropriate to avoid extremes of temperature
- Drink hot or cold drinks depending on the conditions.
- Take regular breaks.
- Site workstations away from heat sources.

It is possible that high temperatures can occur in spaces where air-conditioning/cooling is not normally permitted. If after taking the actions above and the temperature in a space is above 28 deg C for more than one consecutive hour per day over a five day period, and this is adversely affecting the users of the space, then a School/Department can request for the issue to be investigated by the Estates Department (via Estates Customer Services).

The issue will be assessed by the Estates Department to see if the conditions can be improved. Possible options may include fitting solar shading to the building, relocating heat producing equipment, installing central fans or other options dependent on the specific location.

If there is not a way to reduce the temperature, based on the above, then the Department will need to provide funding to pay for the cost of any installation works. They will also need to fund the installation of one or more solar panel on the University's estate to off-set the increase in carbon emissions. (The emissions associated with using air-conditioning will be calculated. The required area of PV panel will then be determined based on the electricity emissions factor for the grid, and the cost advised to the department). A

calculation will be made against the cooling load electrical demand and how this will be offset against the required PV panel(s).

If cooling is provided it will be subject to central control by Estates via the Building Management System.

### 3.2. Portable Air Conditioning Units

Portable air conditioning units are normally prohibited for use on the University's estate. There are a number of reasons for this:

- When systems are not regularly tested and maintained there is the possibility that they could harbour the legionnaires bacteria.
- If the end user does not empty the condensate tray regularly, this can lead to local spillage or flooding if left unattended over a weekend,
- Exhaust ducts hanging out of windows can create security problems and are not very aesthetically pleasing.
- Buildings may not have the capacity to accept large amounts additional electrical load.
- Local control of these units is poor and units may also interfere with a buildings centrally controlled heating system.

Unless there is a specific arrangement with the Estates Department, Schools/Departments will be required to remove any mobile air conditioning units from the University's premises. The supply and use of portable air-conditioning units may be allowed on health grounds if advised by Occupational Health for people with special operational needs within their work environment or to assist with health issues.

Where portable air-conditioning units are found that are not authorised for use the Estates Department will assist with the disposal of the unit(s) if so required.

#### Note

All temperatures are dry bulb

CIBSE Guides and in particular Guide A will be used in all assessments.