

Workplace Thermal Comfort Guidelines

Section 1 - Background and Purpose

Purpose and Objectives

(1) This guideline establishes the approach of La Trobe University to the thermal comfort of staff and students, with the aim of optimising the built environment in ways which are energy efficient and cost effective, environmentally sustainable and legally and technically appropriate.

Overview

(2) Many buildings at La Trobe were built in the 1960s and many are not fully climate controlled.

(3) Resolving the need to provide students and staff with adequate built space to work, learn and research by installing air conditioning, heating and ventilation in all areas will have high capital and operational cost impacts. It also has significant environmental costs, with air conditioning typically accounting for a significant proportion of an organisations greenhouse gas emission.

(4) Thermal comfort is an issue in a significant proportion of workplaces, including the University, particularly during summer.

Section 2 - Scope

(5) This guideline is applicable to new and existing buildings and facilities at all campuses of La Trobe University. Special provisions apply to certain areas which may have a need for strict control of the environment within a confined space (see section on Special Provisions).

Section 3 - Policy Statement

(6) Refer to the [Environmental Sustainability Policy](#).

Section 4 - Procedures

(7) Nil.

Section 5 - Guidelines

(8) La Trobe University recognises that appropriate thermal comfort optimises the safety and comfort of staff and students. It is the responsibility of line managers to respond to concerns about thermal comfort and plan to avoid heat and cold related hazards for staff and students.

(9) La Trobe aims to achieve the following thermal comfort standards in existing buildings, new buildings and refurbishments in all non-exempted spaces:

- a. Minimum (winter design temperature): 19 deg C
- b. Maximum (summer design temperature): 27 deg C
- c. Maximum range in a non air conditioned space 18-32 deg C
- d. Ventilation system to comply with Australian Standards 1668.2 2012.

(10) Line managers may request the Director, Operations and Maintenance to make a formal evaluation of a workplace for thermal comfort.

(11) Requests can be submitted via a Maintenance Request via [Archibus](#) and all requests should detail any non-mechanical options for heating or cooling (see point 13 and 14 below, as appropriate) that have been explored.

(12) When making an evaluation of thermal comfort, the Director, Operations and Maintenance or nominee will consult with affected Space Occupiers, as required.

(13) If the Director, Operations and Maintenance determines an area to be outside the thermal comfort standards, in line with sustainability principles, preference will be given to passive thermal control solutions, such as shading, insulation, natural ventilation, in accordance with Australian Standard 1668.2 2012.

(14) Installation of mechanical solutions will only be considered when passive thermal control fail to achieve the above thermal comfort standards, with a preference given to energy efficient installations such as Mixed Mode systems.

(15) Failure of passive thermal control solutions does not automatically justify a mechanical solution, due to:

- a. the high cost of upgrading air conditioning, heating and ventilation and implications for running costs;
- b. strategic building upgrade priorities and plans in place;
- c. the implications of such equipment for the overall mechanical load in a building which may negatively affect other aspects of building operations; and
- d. inadequacy of existing building management systems leading to a much greater scope and expense of necessary remediation work.

(16) Consistent with the points above, a Space Occupier's capacity to pay does not confer the right to pursue a mechanical solution. Accordingly, approvals for heating, air conditioning and ventilation are to be through the Director, Operations and Maintenance.

(17) Where there is a pre-existing air conditioner, heating or ventilation device, portable air conditioners which are not compliant with this guideline under the new space occupancy, and there is sufficient economic and energy savings to be made and where such action will not compromise the thermal comfort conditions within the space, the Director, Operations and Maintenance may decide to remove it. Use of portable air conditioner is restricted to extreme emergency and medical conditions.

(18) All heating, air conditioning and ventilation must be controlled by:

- a. a building management system; or
- b. in the case of individual units, an energy saving push-button timing device to ensure that the unit will only operate for a limited time.

Supporting Guidelines

(19) Refer to the Management of Thermal Comfort Guidelines.

Special Provisions

(20) The following are examples of the areas that may require air-conditioning owing to the requirements of a specialised function and such cases will be assessed on a case by case basis for priority attention:

- a. Animal House
- b. Research and teaching laboratories
- c. Computer room services
- d. Plant room areas
- e. Museums and Special collections

Section 6 - Definitions

(21) For the purpose of this Guideline:

- a. Air conditioning, heating and ventilation: means a mechanical system or item of equipment that treats air in buildings to assure temperature, humidity, particulate concentration and air movement at levels most conducive to personal comfort, manufacturing processes or preservation of items.
- b. Mixed Mode air conditioning: refers to the complementary use of mechanical cooling or natural ventilation depending on the particular external climatic conditions that results in lower energy use.
- c. Natural ventilation: means the use of windows, ventilators and shafts to supply and remove air using the natural forces of wind and temperature/pressure differentials.
- d. Space Occupier: means an individual person and their associated School, Faculty, Centre, Division or tenant occupying a La Trobe owned asset.
- e. Treatment: means action taken to achieve a level of thermal comfort consistent with this guideline.

Section 7 - Stakeholders

La Trobe University

(22) As an employer, La Trobe University recognises a legal requirement to provide and maintain, so far as practicable, for the employees a working environment that is safe and without risks to health, in accordance with the Victorian [Occupational Health and Safety Act \(2004\)](#).

Line Managers

(23) Managers have a responsibility to ensure that staff members under their management and students are not placed at risk of heat discomfort arising from their work or from the working environment, particularly during the summer months. Accordingly, the responsibility to respond to and resolve thermal comfort issues raised by staff and students rests primarily with the manager in accordance with this guideline and in liaison with senior management, OHS Section and the Director, Operations and Maintenance.

Director, Operations and Maintenance

(24) The Director, Operations and Maintenance has overall responsibility for assessing the heating, ventilation and air conditioning needs, plant and equipment at La Trobe University.

(25) Director, Operations and Maintenance may evaluate:

- a. Whether a La Trobe University workspace occupied by staff under their management or students falls within the

scope of this guideline.

- b. Whether treatment of an area is justified under the scope of this guideline; and
- c. Appropriate solutions (passive or mechanical) to meet the thermal comfort of space occupiers.

(26) The Director, Operations and Maintenance has responsibility for recommending the order of priority and financial approval of all mechanical heating, ventilation and air conditioning treatments at La Trobe University to the Senior Executive Group or its appropriate sub-committees.

Status and Details

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