

# Thermal Comfort Policy

## Section 1 - Policy Statement

### Part A - Policy Declaration

(1) This policy defines the conditions and procedures under which Thermal Comfort shall be assessed and controlled.

### Part B - Policy Description

#### Objectives

(2) The purpose of the Thermal Comfort Policy is to ensure all requests for air conditioning are addressed in a consistent manner and meet certain defined requirements.

(3) The policy addresses the provision of thermal comfort environments to office, teaching and research areas, functional and comfort requirements, occupational health & safety issues and the aesthetic protection of building facades.

(4) The policy provides a guide to assist in deciding the appropriate measures to eliminate or control risks to employees who work in adverse climates.

#### Scope

(5) This policy applies to both existing and future development.

### Part C - Content and Implementation

#### Introduction

(6) The purpose of the Thermal Comfort Policy is to ensure all requests for air conditioning are addressed in a consistent manner and meet certain defined requirements. The policy addresses the provision of air conditioned environments to office, teaching and research areas, functional and comfort requirements, occupational health and safety issues and the aesthetic protection of building facades.

(7) Requests for air conditioning must be accompanied by a Project Justification proposal together with expected recurrent energy usage and maintenance costs including advice as to available electrical supply capacity.

(8) As the university is a signatory to the Talloires Declaration affirming its commitment to environmental management and education thereby joining an ever increasing International community of higher education institutions committed to sustainability.

(9) The university acknowledges the importance of protecting environmental values as part of a global community and through its planning and practice, is committed to ensuring the protection of the environment by keeping impacts to a minimum in a sustainable, financially rewarding and technically feasible manner.

(10) Therefore sustainability issues shall be considered in the assessment of thermal comfort proposals.

(11) In all cases, the approval of the University Executive is required prior to the installation of air conditioning.

## **Regulations**

(12) Generally, the [WorkCover Code of Practice 2001](#), shall be referenced in relation to work undertaken in extreme conditions which gives practical guidance on how the required standard of health, safety and welfare can be achieved unless of course an alternative course of action achieves the same or better result.

(13) The purpose of the regulation is to assist in deciding the appropriate measures to eliminate or control risks to employees who work in adverse climates. Advice should be sought from the Manager, Occupational Health and Safety as required.

(14) Consultation must occur in the following circumstances when changes that may affect health, safety or welfare are proposed to the:

- a. work premises;
- b. systems or methods of work;
- c. plant, equipment, materials or substances used for work;
- d. when risks to health and safety arising from the work are assessed;
- e. when decisions are made to measures to be taken to eliminate or control those risks;
- f. when introducing or altering the procedures for monitoring those risks;
- g. when decisions are made about the adequacy of facilities for employee welfare; and/or
- h. when decisions are made about the procedures for consultation.

## **Workplace Assessment**

(15) In conducting the assessment of workplace risk the following need to be considered:

- a. Air temperature
- b. Humidity
- c. Air movement
- d. Radiant heat
- e. Physical activity
- f. Clothing worn
- g. Physical condition of individuals
- h. Surroundings - building orientation
- i. Combined 'effective temperature'

## **Sustainable Development**

(16) New buildings will continue to be designed to be energy efficient. Subject to available resources, buildings shall incorporate contemporary passive and solar design features to enhance the scope for natural ventilation and environmental control. Only predetermined or essential areas shall be air conditioned.

(17) New air conditioning installations to existing buildings shall only be permitted to essential areas where a controlled environment is critical to the functions performed.

(18) Such areas will generally be limited to:

- a. laboratories or parts thereof;
- b. areas containing large scale computer installations and/or electronic equipment requiring temperature control

- and as a condition of the manufacturer's warranty; and
- c. other areas as approved by Executive.

(19) Air conditioning will not normally be provided unless there are special circumstances which justify such installations. Alternatives may involve investigation and the integration of passive solutions such as shading, natural and forced ventilation.

### **Air Conditioning - Operational Perspectives**

(20) Air conditioning temperature can fluctuate due to cycling periods with variance of temperature from 18-26 degrees Celsius. Generally, air conditioning systems are designed to operate normally to a maximum ambient (outside) temperature of 35 degrees Celsius. Temperatures above this level impact on the operational effectiveness of the system.

(21) Humidity levels beyond 30-60 degrees Celsius also impact on air conditioning performance as does building orientation as east, north and west facing windows may absorb direct and radiant solar heat through conductivity. The reverse applies to south facing windows.

### **Air Conditioning - Installation**

(22) Air conditioning installations shall generally meet the following guidelines:

- a. Systems proposed must be technically sound, energy efficient and comply with Australian Standards.
- b. Equipment locations must be aesthetically, architecturally and environmentally acceptable.
- c. Installation costs shall include a component contribution towards infrastructure renewal and electrical supply upgrade.

(23) All new air conditioning installations and modification of existing installations must be pre-arranged through the Facilities Management and Services primarily because of additional electrical load and assessment of current capacity.

## **Section 2 - Institutional Context**

(24) As the university is a signatory to the Talloires Declaration affirming its commitment to environmental management and education thereby joining an ever increasing International community of higher education institutions committed to sustainability.

(25) The university acknowledges the importance of protecting environmental values as part of a global community and through its planning and practice, is committed to ensuring the protection of the environment by keeping impacts to a minimum in a sustainable, financially rewarding and technically feasible manner.

(26) Therefore sustainability issues shall be considered in the assessment of thermal comfort initiatives.

## **Section 3 - Procedures**

(27) Requests for new or replacement installations to existing installations will be directed to the Campus Services Supervisor.

(28) The Campus Services Supervisor will arrange for each request to be examined and provide advice in respect of:

- a. the selection of a system needed to meet requirements and Australian Standards;
- b. the location, building fabric and aesthetics;

- c. noise and accessibility;
- d. availability of electrical supply;
- e. various Code requirements;
- f. the location and type of any existing air conditioning plant;
- g. the operating and maintenance procedures for the system;
- h. estimate of costs, including purchase, installation costs and operating costs (including electricity, servicing, impact on maintenance program and breakdown repairs);
- i. electrical load factors;
- j. alternate passive building treatments to minimize or avoid air conditioning load;
- k. design, documentation and administration fees as applicable;
- l. prepare tender documentation;
- m. administer installation including ancillary operations and upgrades; and
- n. organise service contracts.

### **Window Units**

(29) Existing window units shall be removed at the end of their service life and replaced with a split system or similar, cost to be borne by Work Unit concerned.

(30) It is intended to rationalize air conditioning installations and to reduce if not eliminate the proliferation of multiple package air conditioning units serving small areas within buildings.

## **Section 4 - Related Policies, Documents, Legislation & Strategic Priorities**

(31) The Policy should be read in conjunction with the University's Occupational Health and Safety Policy. It is available on the Associated Information page, along with a series of temperature maps.

## Status and Details

<b>Status</b>	Historic
<b>Effective Date</b>	14th August 2012
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