

Related Policy	GLP 6 – Occupational Health & Safety GLP 9 – Environmental Management GLP 10 – Built Environment
Procedure Scope	Management of the existing working environment under varying thermal conditions.
Commencement Date	April 2007
Review Date	April 2010
Organisational Unit responsible for day-to-day operation of the procedure	Unit name: Occupational Health and Safety Phone: 7509 Fax: 7536 Email: Rodney.Teague@utas.edu.au

PROCEDURE

1 Purpose

To assist with the management of the indoor work environment and the comfort of staff, students and visitors during varying thermal conditions.

2 Definitions and Acronyms

Thermal comfort: That condition of mind which expresses satisfaction with the thermal environment.

Thermal distress: Excessive temperature, either by itself or in conjunction with humidity and/or poor air circulation and other environmental and personal factors may cause staff and students to experience personal distress, such as headaches and drowsiness. Excessive temperature may also affect employee productivity.

Humidity, by itself, has little effect on comfort if people are not sweating – a wide range of humidity is therefore acceptable. At the recommended indoor air temperatures there are unlikely to be additional health risks for normal healthy people from relative humidity levels expected to be found in Australia. (Comcare, p 16, 1994).

3 Links to Related Forms, Records and Electronic Databases

- ACTU Workcover Guidance to Working in Hot or Cold Environments, ACTU, 2004
- Air-Conditioning and thermal comfort in Australian Public Service offices: An information booklet for health and safety representatives, 44 pages, November 1994, Comcare Australia
- Australian Standard AS 1668: The use of ventilation and air conditioning in buildings, SAI Global.
- Australian Standard AS 3666: Air handling and water systems of buildings, SAI Global.
- Thermal comfort at work, Occupational Safety and Health Working Environment Series 14, AGPS, Australian Safety and Compensation Council, 1987
- Workplace Health and Safety Act 1995
- Workplace Health and Safety Regulations 1998

4 Guidelines

The Workplace Health and Safety Act 1995 imposes a general duty of care on employers to ensure, as far as is reasonably practicable, that each employee is safe from injury and risks to health while at work, in particular through the provision and maintenance of a safe working environment.

Regulation 116(2) of the Workplace Health and Safety Regulations 1998 requires an enclosed workplace, where practicable, to be maintained at a 'comfortable temperature'.

Taking into account the above, the following principles will apply:

- 4.1 A person's perception of thermal comfort is affected by air temperature, air movement (speed), humidity, clothing, activity level, mean radiant temperature (the average temperature of the walls, floor, windows etc) and many other factors.
- 4.2 For general office work, 20 to 24⁰C is found to be a comfortable temperature in winter when wearing winter clothes and 23 to 26⁰C is generally comfortable in summer when wearing summer clothes (Comcare p 9, 1994). Temperatures a few degrees outside these comfort ranges, while uncomfortable, are unlikely to affect health if people dress suitably (Comcare p 9, 1994).

- 4.3 For the University of Tasmania, a few degrees is defined as +/- 3°C. It is acknowledged that temperatures may at times fluctuate outside the preferred comfort temperature range.
- 4.4 Temperatures above 38° C are considered extreme for all except the lightest sedentary activity.
- 4.5 Temperatures between 30 and 38° C are likely to be extreme for performing heavy or moderate physical activities.
- 4.6 The range of temperatures referred to in 4.2 to 4.5 will also be contingent on other strategies being adopted to manage thermal comfort. That is, air temperatures (summer and winter) should not be seen in isolation. For example, the mean radiant temperature, from all surrounding surfaces, should be considered in the assessment and solution process

Temperature Control Features and Measures

Local Control Measures

- 4.7 The following local control measures may be implemented to control indoor air temperature within comfortable limits:
- Open doors or windows or operate exhaust fan if installed to increase air movement and evaporation if cooler outside than inside
 - Manage window blinds/curtains or screens to reduce radiant heat
 - Identify and isolate equipment giving off radiant heat
 - Re-organise duties or perform duties in a different environment (eg. tasks that require more physical effort should be done in the cooler part of the day or in cooler areas)
 - Vary hours worked (eg. arrive early/leave early)
 - Job rotate or take frequent rest breaks
 - Encourage people to wear appropriate clothes, including layers (eg. loose, light clothing during expected hot days and warmer clothes during expected colder days)
 - Encourage people to drink cool water frequently even if not thirsty.
- 4.8 Where a member of staff is suffering personal distress from the effects of the environmental factors, and the cause of the distress cannot be immediately eliminated, the Head of Budget Centre may allow the staff member to take rest periods in a suitable environment on that day. If necessary, she or he may be released from duty for the remainder of any day when conditions are extreme.

- 4.9 Where a student is suffering personal distress from the effects of the environmental factors, and the cause of the distress cannot be immediately eliminated, the Head of Budget Centre may allow the student to take rest periods in a suitable environment on that day. If necessary, she or he may be released from the remainder of any class on any day when conditions are extreme. Release from class in these circumstances is without academic disadvantage to the student.
- 4.10 In deciding whether to suspend work or not, Heads should consider factors such as temperature, humidity, radiant heat, level of physical activity and safety-critical tasks such as operating machinery or handling chemicals, as well as the pressure to meet deadlines. Individual needs such as medical conditions should also be taken into account.
- 4.11 The following rest breaks are recommended in the Workcover Guidance to Working in Hot or cold Environments (ACTU, 2004) and may be considered by Heads of Budget Centres in accordance with 4.7, 4.8 and 4.9 above:

- 30 – 32° C: 10 minutes per hour
- 32 – 35° C: 15 minutes per hour
- 35 – 36° C: 30 minutes per hour
- 37° C or higher: cease work until conditions improve.

Ideally, breaks should be taken in cool areas. As a minimum, the physically demanding tasks should cease temporarily and staff should rest and consume cool water.

- 4.12 Details of the circumstances which result in staff and students experiencing distress shall be reported to the Occupational Health & Safety Unit through the University Accident and Incident reporting process.

Physical Control Measures

- 4.13 Tasmania has relatively low ambient day time temperatures and few days of high temperatures. The University will design future buildings to ensure that heat gain and loss from external sources is minimised. Where there is a need to retrospectively consider excessive heat gain or loss resulting from poor design, all options, including passive design measures, will be explored.
- 4.14 Comfort air conditioning will not normally be provided unless there are special circumstances which justify such installations.
- 4.15 New buildings will continue to be designed in accordance with the relevant Australian Standards and to be energy efficient. They will incorporate environmental sustainable design including passive

features to minimise heat gain/loss which will enhance environmental control.

4.16 New air conditioning installations in existing buildings will be permitted only in those essential areas where a controlled environment is critical to the functions performed or where there are large gatherings of people.

4.17 Temperature control measures should meet design guidelines and relevant standards.

Responsibilities

4.18 Repairs and general maintenance on centrally managed plant and equipment should be reported to Asset Management Services through the Pinnacle job request system.

4.19 Requests for works for additional comfort considerations are to be submitted to Asset Management Services via the Minor Works request procedure.

5 Key Words

- Air conditioning
- Heat
- Temperature
- Thermal comfort
- Thermal distress

6 Supporting Guidelines, Flow-charts, Check-lists, etc

N/A

RESPONSIBILITIES

Implementation	Occupational Health and Safety	
Compliance	Occupational Health and Safety	
Development/Review	Occupational Health and Safety	
Interpretation and Advice	Occupational Health and Safety	

WHO SHOULD KNOW THIS PROCEDURE?

- All staff and students

DOCUMENT HISTORY

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Approved or Rescinded	Endorsed OH&S Committee
Policy Maker (Title)	Director, Asset Management
Policy Maker (Signature)	
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