

## Cooling Tower Systems

This updates the previous Practice Note 45 issued April 2014.

Reference to the BCA in this Practice Note means Volume One of the National Construction Code Series.

### INTRODUCTION

The Public Health and Wellbeing Act 2008 commenced on 1 January 2010 and replaced the cooling tower system provisions in the Building Act 1993 (the Act). The Health and Wellbeing Regulations 2009 commenced on the 1 January 2010 and replaced the Health (Legionella) Regulations 2001.

The Public Health and Wellbeing Act 2008 and The Health and Wellbeing Regulations 2009 now provide the requirements for the registration and maintenance of Cooling Tower systems. This means that the registration of a cooling tower system is now undertaken by the Department of Health and Human Services rather than the Victorian Building Authority.

The removal of the Cooling Tower Systems from the Building Act 1993 (The Act) does not limit the responsibilities of the relevant building surveyor (RBS) when issuing building and occupancy permits and maintenance of essential services.

Part A of this Practice Note explains the requirements of the RBS.

Part B explains the requirements the owner or responsible person must comply with under the Public Health and Wellbeing regulations. Information in Part B is included in order that the RBS has an opportunity to be able to advise clients of their responsibilities.

### PART A: RESPONSIBILITIES OF THE RBS

#### **New building work incorporating a cooling tower system**

##### **Building permits**

When evaluating an application for a building permit, the RBS assesses plans and documentation for compliance with the Building Code of Australia (the "BCA").

Clause F4.5 of BCA Volume One requires a mechanical ventilation or air-conditioning system to comply with AS/NZS 3666.1 (and AS 1668.2), where installed in lieu of natural ventilation complying with Clause F4.6.

Clause F2.7 of BCA Volume One also requires hot water, warm water and cooling water systems to be installed in accordance with AS/NZS 3666.1. This does not apply to a system serving only a sole occupancy unit in a Class 2 or 3 building or Class 4 part.

Where a cooling tower system forms part of the mechanical ventilation system or air-conditioning system, it is necessary to specifically check the location of the cooling tower in relation to air intakes, air exhausts and drift control measures, in accordance with

# Practice Note 2016-45

AS/NZS 3666.1. Warm water systems should also be checked for compliance with AS/NZS 3666.1.

Alternatively, the applicant may choose to provide a, “Certificate of Compliance — Design” from a suitably qualified building practitioner in relation to the system.

It is important that compliance is verified at this stage, as the RBS may not be able to subsequently issue a valid occupancy permit. This is explained in more detail below.

## Occupancy Permits

When issuing an occupancy permit, the RBS should consider the inclusion of a cooling tower — as part of an air-conditioning or mechanical ventilation system — in the nominated essential services under Part 12 of the Building Regulations 2006 (the Regulations), and make a determination as to the level of performance required.

The Regulations specify the maintenance requirements of mechanical ventilation and hot water, warm water and cooling water systems in accordance with AS/NZS 3666.2. However, the requirements for maintenance and testing of cooling tower systems under the Public Health and Wellbeing Regulations 2009 take priority and the land owner should be advised to contact the Department of Health and Human Services.

It is an offence under the Health and Wellbeing Act 2008 for the land owner of a newly constructed cooling tower system to commission the system prior to registering the cooling tower system. It is also an offence to commission the cooling tower system prior to preparing a Risk Management Plan (RMP). There are substantial penalties attached to these offences.

Mechanical ventilation or air-conditioning systems required by Clause F4.5 (b) of BCA Volume One and incorporating a cooling tower system would need to be commissioned and in operation before the RBS could consider issuing an occupancy permit.

It is suggested that the RBS advise clients of this fact, so that the owner is able to prepare an RMP and register the cooling tower system in a time frame that will allow commissioning of the system at an appropriate time relative to an application for an occupancy permit.

The land owner or responsible person can obtain evidence of registration of the cooling tower system from the Department of Health and Human Services. In addition, a plumber’s compliance certificate that relates to the cooling tower system will need to be sighted, before issuing an occupancy permit. (In accordance with section 44 of the Act.)

Section 221ZH (1) of the Act prescribes the types of plumbing work for which a plumber’s compliance certificate should be issued. The section has been amended to include:

“the construction, installation, alteration relocation or replacement of a cooling tower or any other part of a cooling tower system (including the installation or replacement of any associated device or equipment)”.

If a non-complying system is approved and installed, then a valid plumber’s compliance certificate cannot be issued. Section 44 of the Act precludes an RBS from issuing an occupancy permit if, amongst other things, a compliance certificate required by section 221ZH has not been sighted. An occupancy permit issued on the basis of sighting an invalid compliance certificate would have no force or effect.

# Practice Note 2016-45

## **PART B: LAND OWNERS' RESPONSIBILITY UNDER THE ACT**

### **THE PUBLIC HEALTH AND WELLBEING ACT 2008**

Every cooling tower system that is in operation in Victoria must be registered with the Department of Health and Human Services.

It is the land owners' responsibility to ensure the cooling tower system is registered before it is commissioned or comes in to operation, even if it is only being tested. The land owners' agent is able to register the cooling tower system on behalf of the land owner.

The land owner must ensure a risk management plan is developed in respect of a cooling tower system before it is commissioned or comes into operation, even if it is only being tested. The risk management plan then must be reviewed annually and following a trigger event described in the Act and audited annually until the system is decommissioned with the Department of Health and Human Services.

The risk management plan can be developed and reviewed by any capable person. The risk management plan must be audited annually by an auditor approved by the Department of Health and Human Services.

It is common for the party operating the cooling tower system to register the system, organise the development, review and audit of the risk management plan on behalf of the land owner.

### **THE PUBLIC HEALTH AND WELLBEING REGULATIONS 2009**

The Public Health and Wellbeing Regulations 2009 commenced on 1 January 2010 and replaced the Health (Legionella) Regulations 2001.

These regulations set out the maintenance and testing requirements for cooling tower systems and water delivery systems.

The 'responsible person' for the cooling tower systems or water delivery system must comply with the Public Health and Wellbeing Regulations 2009. The 'responsible person' is described in the regulations as the person who owns, manages or controls the cooling tower system. During the construction of a building that contains a cooling tower system or water delivery system it may be the construction company that is responsible for ensuring compliance with the regulations.

The maintenance and testing requirements for cooling tower systems and water delivery systems are provided for in the Public Health and Wellbeing Regulations 2009. These are different to the requirements in AS/NZS 3666.2 and take priority over the recommendations of AS/NZS 3666.2

Department of Health and Human Services has powers of prosecution under the Public Health and Wellbeing Act 2008 concerning all offences that relate to Legionella controls, including the failure to register a cooling tower system, prepare an RMP, or have it reviewed or audited.

It should be noted that the legislation applies not only to cooling towers that form part of 'building work', but all cooling tower systems including, but not limited to, those used for industrial processes, refrigeration and farming purposes.

The officers from the Department of Health and Human Services are authorised to enforce the Act and Regulations and have powers of entry to investigate potential contraventions.

The Act and Regulations are available at [www.legislation.vic.gov.au](http://www.legislation.vic.gov.au)

# Practice Note 2016-45

## Further information

### Department of Health and Human Services technical information

The Departments' Legionella Team is able to provide further technical information to owners and building surveyors.

The team is contactable by email:  
[Legionella@health.vic.gov.au](mailto:Legionella@health.vic.gov.au) or by phone on  
1800 248 898.

RMP templates and guidelines can be  
downloaded from.

<http://www.health.vic.gov.au/legionella/>

If you have a technical enquiry please email:  
[technicalenquiry@vba.vic.gov.au](mailto:technicalenquiry@vba.vic.gov.au) or phone  
1300 815 127

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