

---

**MP 4.1 – SUSTAINABLE BUILDINGS**

---

**Table of Contents**

Purpose..... 2

Commencement..... 2

Application..... 2

Referral Agency..... 3

Associated Requirements ..... 3

Referenced standards ..... 3

Definitions..... 3

Energy Efficiency..... 6

Energy Efficient Fixtures ..... 7

Water Conservation..... 7

**Purpose**

To ensure *class 1* and *class 2* buildings are energy and water efficient.

**Commencement**

In this version of Mandatory Part (MP) 4.1:

- *performance criteria* P1, P2 and P4 to P6 commence on 1 March 2009; and
- *performance criterion* P3 commences on 1 July 2009

This version of MP 4.1 replaces the version of MP 4.1 published on 16 November 2007.

**Application**

This part applies to -

- (a) the lawful carrying out of building work starting on or after 1 March 2009 for *class 1* and *class 2* buildings that is self assessable development for purposes of the State under schedule 8, part 2 of the *Integrated Planning Act 1997*, as if it is assessable development; and
  - (b) building work that is assessable building work or self-assessable building work for *class 1* or *class 2* buildings,
- as indicated by ticks (✓) in the relevant columns in Table 1 below.

**Table 1 – Application of MP 4.1**

Application	Performance Criteria					
	1	2	3	4	5	6
<i>Construction of a class 1 building.</i>	✓	✓		✓	✓	✓
<i>Construction of a class 2 building.</i>		✓		✓	✓	✓
<i>Renovation to a class 1 building.</i>	✓	✓				
<i>Renovation to sole-occupancy units in a class 2 building.</i>		✓				
<i>Other renovation to a class 1 building.</i>	✓	✓		✓	✓	
<i>Other renovation to sole-occupancy units in a class 2 building.</i>		✓		✓	✓	
<i>Installation of an air-conditioner in a class 1 or class 2 building.</i>			✓			

## Referral Agency

There is no referral agency for this part.

Where a *building development application* does not comply with the *acceptable solution* of this part, the assessment manager may assess the building for compliance with the *performance criteria* of this part under section 57 of the *Building Act 1975*.

## Associated Requirements

- Building Code of Australia
- *Building Act 1975*
- *Building Regulation 2006*
- *Integrated Planning Act 1997*
- *Plumbing and Drainage Act 2002*
- *Standard Plumbing and Drainage Regulation 2003*
- Plumbing Code of Australia
- *Water Efficiency Labelling and Standards Act 2005*
- *Water Supply (Safety and Reliability) Act 2008*
- *Electrical Regulation 2006*

## Referenced standards

AS/NZS 3500.1:2003	Plumbing and Drainage – Part 1: Water Services
AS/NZS 3823.2:2005	Performance of electrical appliances – Air-conditioners and heat pumps – Energy labelling and MEPS
AS/NZS 6400:2005	Water Efficient Products – Rating and Labelling
AS 1172.1:2005	Water closets (WC)-Part 1:Pans
AS 1172.2:1999	Water closet (WC) pans of 6/3L capacity or proven equivalent-Part 2: Cistern
AS/NZS 3823.2:2005	Performance of electrical appliances – air-conditioners and heat pumps - Energy labelling and minimum energy performance standard (MEPS) requirements
AS/NZS 3718:2005	Water supply- Tap ware

## Definitions

Note: Italicised words in the text of the part are as defined below.

**Acceptable solution** means a relevant building solution which is deemed to satisfy the relevant *performance criterion* for the purposes of section 14 (4) (a) (ii) of the *Building Act 1975*.

**Air-conditioner** means any single-phase or three-phase *air-conditioner* of the vapour compression type up to a cooling capacity of 65kW.

**Class 1** has the meaning given in the Building Code of Australia.

**Class 2** has the meaning given in the Building Code of Australia.

**Class 10a** has the meaning given in the Building Code of Australia.

**Climate zone** has the meaning given in the Building Code of Australia.

**Construction** means building work for a new *class 1* or *class 2* building.

**Energy efficient lighting** is lighting with a minimum output of 27 lumens per watt and excludes a lamp used in a bathroom for the purposes of radiating heat.

**Energy Efficiency Ratio (EER)** means the tested average energy efficiency ratio for cooling as specified in 'AS/NZS 3823.2: 2005 Performance of electrical appliances – air-conditioners and heat pumps – energy labelling and minimum energy performance standard (MEPS) requirements'.

**Other renovation** means any alteration or addition to an existing *class 1* building or the *sole occupancy unit* of a *class 2* building which requires a building development approval and a *plumbing application*.

**Outdoor living area** means a space that:

- (i) is directly accessible from, and attached to, a living area of the *class 1* building such as a lounge, kitchen, dining and family rooms; and
- (ii) has a minimum floor area of 12.0 square metres and a minimum dimension in all directions of 2.5 metres; and
- (iii) is fully covered by a impervious roof; and
- (iv) has two or more sides open or capable of being readily opened.

**Performance criteria** means the outcome that must be achieved for an element of a building.

**Plumbing application** means the compliance assessment processes, compliance permit or compliance certificate, under sections 78 and 79 of the *Plumbing and Drainage Act 2002* for ensuring that plumbing, drainage and on-site sewerage systems complies with the *Plumbing and Drainage Act 2002* and *Standard Plumbing and Drainage Regulation 2003*.

**Renovation** means any alteration or addition to an existing *class 1* building or the *sole occupancy unit* of a *class 2* building requiring building development approval or additions.

**Sole-occupancy unit** means a room or other part of a building occupied by one or joint owners, lessee, tenant or other occupiers to the exclusion of any other owner, lessee, tenant or other occupier and includes a dwelling.

**Total R-Value** has the meaning given in the Building Code of Australia.

**Verification method** means a method of determining compliance with the stated value in section V2.6.2.1 and the definition in V2.6, Volume 2 of the Building Code of Australia 2008 using a thermal calculation method that complies with the Australian Building Codes Board Protocol for House Energy Rating Software 2006.1.

**Water service** is defined by the *Water Supply (Safety and Reliability) Act 2008*.

**Water service provider** for premises, means the person registered under the *Water Supply (Safety and Reliability) Act 2008*, chapter 2, part 3, as the *water service provider* for retail *water services* for the premises.

**PERFORMANCE CRITERIA****ACCEPTABLE SOLUTIONS****Energy Efficiency**

- P1** A *class 1* building and an enclosed *class 10a* building attached to a *class 1* building must comply with performance requirement P2.6.1 and P2.6.2 of the Building Code of Australia and any Queensland variations do not apply.
- A1** A *class 1* building and an enclosed *class 10a* building attached to a *class 1* building complies with:
- (a) part 3.12 of the Building Code of Australia and any Queensland variations do not apply; or
  - (b) verification using a reference building in accordance with V2.6.2 and the definition of V2.6 of the Building Code of Australia; or
  - (c) a *verification method* indicating achievement of an energy equivalent rating of not less than 5-stars; or
  - (d) in *climate zones* 1 or 2, where the building includes an *outdoor living area*, a *verification method* indicating achievement of an energy rating of not less than;
    - (ii) 4.5-stars where the *outdoor living area* roof covering achieves a *Total R-Value* of 1.5 for downward heat flow; or
    - (iii) 4-stars provided that the *outdoor living area* has at least one permanently fixed ceiling fan with a speed controller and a blade rotation diameter of not less than 900 mm and the roof covering achieves a *Total R-Value* of 1.5 for downward heat flow.

**Note:** *Acceptable solutions* A1(a), (b) and (c) will not apply after the introduction of the Building Code of Australia 2009 which commences on 1 May 2009.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
<b>Energy Efficient Fixtures</b>	
<p><b>P2</b> In <i>class 1</i> and <i>class 2</i> buildings internal lighting must be energy efficient.</p>	<p><b>A2</b> <i>Class 1</i> and <i>class 2</i> buildings have <i>energy efficient lighting</i> for a minimum of 80 per cent of total fixed internal lighting.</p>
<p><b>P3</b> In <i>class 1</i> and <i>class 2</i> buildings hard-wired <i>air-conditioners</i> must be energy efficient.</p>	<p><b>A3</b> In <i>class 1</i> and <i>class 2</i> buildings, hard-wired <i>air-conditioners</i> installed have an <i>EER</i> of at least 2.9.</p>
<b>Water Conservation</b>	
<p><b>P4</b> In <i>class 1</i> and <i>class 2</i> buildings, in areas serviced by a <i>water service provider</i>, shower roses must facilitate the efficient use of water.</p>	<p><b>A4</b> In <i>class 1</i> and <i>class 2</i> buildings, in areas serviced by a <i>water service provider</i>, all shower roses have a minimum 3-star Water Efficiency Labelling and Standards rating.</p>
<p><b>P5</b> In <i>class 1</i> and <i>class 2</i> buildings, in areas serviced by a <i>water service provider</i>, toilet cisterns and bowls must facilitate the efficient use of water.</p>	<p><b>A5</b> In <i>class 1</i> and <i>class 2</i> buildings, in areas serviced by a <i>water service provider</i>, all toilets cisterns:</p> <ul style="list-style-type: none"> <li>(a) have a dual flush function and have a minimum 4-star Water Efficiency Labelling and Standards rating; and</li> <li>(b) are compatible with the size of the toilet bowl to allow for proper functioning of the toilet.</li> </ul>
<p><b>P6</b> In <i>class 1</i> and <i>class 2</i> buildings, in areas serviced by a <i>water service provider</i>, tap ware must facilitate the efficient use of water.</p>	<p><b>A6</b> In <i>class 1</i> and <i>class 2</i> buildings, in areas serviced by a <i>water service provider</i>, tap ware has a minimum 3-star Water Efficiency Labelling and Standards rating for taps serving:</p> <ul style="list-style-type: none"> <li>(a) laundry tubs; and</li> <li>(b) kitchen sinks; and</li> <li>(c) basins.</li> </ul>

**Note:** Water Efficiency Labelling and Standards (WELS) – references the Australian Government’s labelling standards scheme for water efficient products.