
MP 4.1 – SUSTAINABLE BUILDINGS

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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 May 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 3 February 2009.

Application

This part applies to the lawful carrying out of building work as indicated by ticks (✓) in the relevant columns in Table 1 below.

Note: Reference should also be made to sections 36, 37 and 61 of the *Building Act 1975*, which may affect the application of MP 4.1.

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 a sole-occupancy unit in a class 2 building.</i>		✓				
<i>Other renovation to a class 1 building.</i>	✓	✓		✓	✓	✓*
<i>Other renovation to a sole-occupancy unit in a class 2 building.</i>		✓		✓	✓	✓*
<i>Installation of an air-conditioner in a class 1 or class 2 building.</i>			✓			

* Note: This applies to only the new work included in the plumbing approval. This is an applied provision under the Standard Plumbing and Drainage Regulation 2003

Referral Agency

There is no referral agency for this part.

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 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	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 that is required to have a tested average *energy efficiency ratio*.

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 heat 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 Performance of electrical appliances – air-conditioners and heat pumps – energy labelling and minimum energy performance standard (MEPS) requirements'.

Installation means, for an *air-conditioner*, placing in position for use in the building and includes connecting to the building's electrical wiring either directly by a permanently fixed connection or by using a plug to access a general purpose outlet.

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 approval*.

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, not including the connection between the internal living area and the outdoor living area.

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

Plumbing approval 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.

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 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 (Volume 2).
- A1** A *class 1* building, and an enclosed *class 10a* building attached to a *class 1* building, complies with:
- (a) part 3.12 (Vol. 2) of the Building Code of Australia; or
 - (b) verification using a reference building in accordance with V2.6.2 and the definition of V2.6 (Vol. 2) 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;
 - (i) 4.5-stars where the *outdoor living area* roof covering achieves a *Total R-Value* of 1.5 for downward heat flow; or
 - (ii) 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.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
Energy Efficient Fixtures	
<p>P2 In <i>class 1</i> and <i>class 2</i> buildings and an enclosed <i>class 10a</i> building attached to a <i>class 1</i> or <i>class 2</i> building internal lighting must be energy efficient.</p>	<p>A2 <i>Class 1</i> and <i>class 2</i> buildings and an enclosed <i>class 10a</i> building attached to a <i>class 1</i> or <i>class 2</i> building have <i>energy efficient lighting</i> for a minimum of 80 per cent of total fixed internal lighting.</p>
<p>P3 In <i>class 1</i> and <i>class 2</i> buildings new and replacement <i>air-conditioners</i> must be energy efficient.</p>	<p>A3 In <i>class 1</i> and <i>class 2</i> buildings, new and replacement <i>air-conditioners</i> have an <i>EER</i> of at least 2.9.</p>
Water Conservation	
<p>P4 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>A4 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>P5 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>A5 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"> (a) have a dual flush function and have a minimum 4-star Water Efficiency Labelling and Standards rating; and (b) are compatible with the size of the toilet bowl to allow for proper functioning of the toilet.
<p>P6 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>A6 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"> (a) laundry tubs; and (b) kitchen sinks; and (c) basins.

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