



Queensland Development Code

Mandatory Part 4.1 – Sustainable buildings

Version 1.15



Queensland
Government

Contents

Guide to using the Queensland Development Code part	4
Overview	4
What is the Queensland Development Code?	4
Building Code of Australia	4
Relationship between the Building Code of Australia and the Queensland Development Code	4
Terminology between the Building Code of Australia and Queensland Development Code	4
Chapter 1 Preliminary	5
1 Name of the QDC part	5
2 Purpose	5
3 Commencement	5
4 Application	6
5 Compliance	6
6 Referral agency—building work for end-of-trip facilities	7
What is a referral agency?	7
What is the role of a referral agency?	7
Who is the referral agency for this part?	7
7 Associated requirements	7
8 Requirements of the Building Code of Australia not varied	7
9 Referenced documents	8
10 Explanatory information	8
11 Exemptions	8
12 Definitions	8
Chapter 2 Performance criteria and acceptable solutions	15
1 Energy efficiency – class 1 buildings	15
P1 Performance criteria	15
A1 Acceptable solution	15
2 Energy efficiency – class 2 buildings	15
P2 Performance criteria	15
A2 Acceptable solution	15
3 Water conservation	16
P7 Performance criteria	16
A7 Acceptable solution	16
4 Electricity sub-metering	16
P9 Performance criteria	16
A9 Acceptable solution	16
P10 Performance criteria	16
A10 Acceptable solution	16
P11 Performance criteria	16
A11 Acceptable solution	16

5	End-of-trip facilities	16
	P12 Performance criteria	16
	A12 Acceptable solution	17
	Schedule 1 – Designated Local Governments	19
	Schedule 2 – AS 2890.3:1993 modifications	20
	Schedule 3 – Occupant ratios	21
	Schedule 4 – Change room requirements	22
	Table A	22
	Table B	23

Guide to using the Queensland Development Code part

Overview

This guide is intended to provide information to help readers understand the Queensland Development Code, *MP 4.1 – Sustainable buildings* (the QDC part), which is a mandatory part of the code.

What is the Queensland Development Code?

The Queensland Development Code (QDC) consolidates Queensland specific building standards into a single document. The QDC covers Queensland matters which are outside the scope of, and in addition to the Building Code of Australia (BCA).

Building Code of Australia

The BCA refers to volume 1 and volume 2 of the National Construction Code (NCC) as defined in section 12 of the *Building Act 1975*.

Relationship between the Building Code of Australia and the Queensland Development Code

The requirements under the BCA continue to apply. This QDC part overrides the BCA to the extent that it is inconsistent with the provisions of the BCA.

Terminology between the Building Code of Australia and Queensland Development Code

The following terms are used interchangeably between the BCA and QDC:

Building Code of Australia	Queensland Development Code
Performance requirement	Performance criteria
Deemed to satisfy solution	Acceptable solution
Performance solution	Performance (or alternative) solution

Chapter 1 Preliminary

1 Name of the QDC part

This part of the Queensland Development Code (QDC part) may be cited as the *Queensland Development Code, MP 4.1 – Sustainable buildings*.

2 Purpose

The purpose of this part is to ensure:

- (a) class 1 buildings and class 2 buildings are energy and water efficient;
- (b) the electricity supplied to each meterable premises can be measured appropriately; and
- (c) end-of-trip facilities are provided in major developments located in designated local government areas.

3 Commencement

This version of *MP 4.1 – Sustainable buildings* commences on 1 May 2024 and replaces *MP 4.1 – Sustainable buildings* published on 17 September 2020.

Version	Commencement date	Publication date
1.15*	1 May 2024	19 September 2023
1.13	17 September 2020	1 March 2021
1.12	1 February 2013	15 January 2013
1.11	1 November 2012	10 September 2012
1.10	6 August 2012	10 July 2012
1.9	8 July 2011	27 June 2011
1.8	26 November 2010	12 November 2010
1.7	1 September 2010	30 July 2010
1.6	1 May 2010	13 April 2010
1.5	1 March 2010	4 February 2010
1.4	1 January 2010	27 November 2009
1.3	26 June 2009	24 June 2009
1.2	1 March 2009	3 February 2009
1.1	1 January 2008	16 November 2007
1.0	1 March 2006	1 March 2006

*Note: Version 1.14 was published on 12 July 2023 but was not adopted

4 Application

- (1) This QDC part applies to the lawful carrying out of building work as indicated by ticks (✓) in the relevant columns in Table 1, subject to subsection (2).
- (2) This QDC part and the relevant BCA (NCC, volume 2) provisions do not apply to the lawful carrying out of building work to a class 1 building where:
- (a) any of the following applies:
- (i) a building certifier has, by written notice given to the owner, certified that the building has been affected by a flood or storm surge; or
 - (ii) the building is located in a natural hazard management area (flood); or
 - (iii) a local government has, by written notice given to the owner or notice published on the local government's website, declared that the building is likely to be affected by a future flood or storm surge; and
- (b) a building certifier certifies the work is, or directly relates to, raising the building.

Note: reference should also be made to sections 36, 37, 61 and 81 of the *Building Act 1975*, which may affect the application of QDC MP 4.1.

Table 1 – Application of QDC MP 4.1

Application	Performance requirements						
	1	2	7	9	10	11	12
Construction of new class 1 buildings	✓		✓				
Renovation of a class 1 building	✓						
Construction of new class 2 buildings		✓	✓	✓	✓	✓	
Renovation of a sole-occupancy unit in a class 2 building		✓					
Construction of a new class 5 building				✓	✓	✓	
Construction of a new major development or a major addition to a major development located in a designated local government area							✓

5 Compliance

Compliance with QDC parts is governed by section 14 of the *Building Act 1975*.

Section 14 of the *Building Act 1975*:

- (a) complying with the acceptable solutions; or
- (b) formulating a performance solution which complies with the performance criteria or is shown to be at least equivalent to the acceptable solutions; or
- (c) a combination of (a) and (b).

6 Referral agency—building work for end-of-trip facilities

What is a referral agency?

A referral agency is the entity defined in section 54(2) of the *Planning Act 2016* as a referral agency for development applications pertinent to this part.

What is the role of a referral agency?

The role of a referral agency is to provide advice on and conduct assessments for compliance related matters pertinent to a particular part.

Who is the referral agency for this part?

The local government is the referral (concurrence) agency for a building development application under the *Planning Regulation 2017*, schedule 9, table 10, item 1, if:

- (a) the application is for building work that is:
 - (i) assessable development under schedule 9, section 1; and
 - (ii) for development that performance criteria P12 (End-of-trip facilities) of this part of the QDC applies to; and
- (b) the building work does not comply with the requirements of acceptable solution A12 stated in this part.

7 Associated requirements

Other legislation, regulation or codes that affect this part. These include:

- *Body Corporate and Community Management Act 1997*
- *Building Act 1975*
- *Building Regulation 2021*
- BCA (NCC, volume 1 and volume 2)
- *Electricity Act 1994*
- *Electricity Regulation 2006*
- *Electrical Safety Act 2002*
- *Electrical Safety Regulation 2013*
- *Plumbing and Drainage Act 2018*
- *Plumbing and Drainage Regulation 2019*
- Plumbing Code of Australia (NCC, volume 3)
- Queensland Plumbing and Wastewater Code
- *Planning Act 2016*
- *Planning Regulation 2017*
- *Water Efficiency Labelling and Standards (Queensland) Act 2005*
- *Water Supply (Safety and Reliability) Act 2008*.

8 Requirements of the Building Code of Australia not varied

Where a requirement of the BCA is not varied by this QDC part, that requirement continues to apply.

9 Referenced documents

The table below sets out the number and title of each Australian Standard referred to in this QDC part. The Australian Standards are the editions as amended from time to time by Standards Australia and as referenced by the BCA.

Number	Year	Title
AS 62053.21	2005	Electricity metering equipment (AC) – Particular requirements Part 21: Static meters for active energy (classes 1 and 2)
AS 1284.1	2004	Electricity metering Part 1: General purpose induction watt hour meters
AS 2890.3	1993	Parking facilities Part 3: Bicycle parking facilities (including modifications as specified in schedule 2)

10 Explanatory information

Not applicable.

11 Exemptions

Not applicable.

12 Definitions

Acceptable solution as defined in Schedule 10 to the Building Regulation 2021:

acceptable solution, for a particular performance criteria, means the acceptable solution for the performance criteria stated in the QDC.

Alterations as defined in Schedule 2 to the Building Act 1975:

alterations, to an existing building or structure, includes additions to the building or structure.

Building Code of Australia (BCA) as defined in section 12 of the Building Act 1975:

- (1) *The Building Code of Australia (or BCA) is the document called 'National Construction Code', volume 1 and volume 2 (including the Queensland Appendixes) published by the entity known as the Australian Building Codes Board (the board).*
- (2) *The reference to the document called 'National Construction Code' in subsection (1) includes the edition of the code as amended from time to time by amendments published by the board.*

BCA climate zone as defined in Schedule 1 to the BCA (NCC, volume 1 and volume 2):

an area defined in Figure 2 and in Table 2 for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Bicycle means a two-wheeled vehicle designed to be propelled by human power and with overall dimensions within those specified by AS 2890.3:1993.

Bicycle parking and storage facility means an area or structure used for parking, storage or securing of bicycles, which provides a level of security for the bicycle in accordance with

the security classifications provided in AS 2890.3:1993 (including modifications as specified in schedule 2).

Building as defined in Schedule 2 to the Building Act 1975:

- (1) A building is a fixed structure that is wholly or partly enclosed by walls or is roofed.
- (2) The term includes a floating building and any part of a building.

Building certifier as defined in section 8 of the Building Act 1975:

- (1) A building certifier is an individual who, under chapter 6, part 3 [of the Building Act 1975], is licensed as a building certifier.
- (2) A reference to building certifier includes a reference to a private certifier.
- (3) In chapter 6 [of the Building Act 1975], the term also includes a reference to a former building certifier.

Building work as defined in section 5 of the Building Act 1975:

- (1) Building work is—
 - (a) building, repairing, altering, underpinning (whether by vertical or lateral support), moving or demolishing a building or other structure; or
 - (b) excavating or filling—
 - (i) for, or incidental to, the activities mentioned in paragraph (a); or
 - (ii) that may adversely affect the stability of a building or other structure, whether on the land on which the building or other structure is situated or on adjoining land; or
 - (c) supporting, whether vertically or laterally, land for activities mentioned in paragraph (a); or
 - (d) other work regulated under the building assessment provisions.
- (2) For subsection (1)(d), work includes a management procedure or other activity relating to a building or structure even though the activity does not involve a structural change to the building or structure.

Examples—

- a management procedure under the fire safety standard relating to a budget accommodation building
- a management procedure under the fire safety standard (RCB) relating to a residential care building.

Change room means a room where an occupant is able to change clothes in privacy, either individually or on a gender basis and that contains washbasins, mirrors, showers and sanitary compartments.

Class, for a building or structure, means its classification under the BCA.

Commercial office building means a class 5 building as classified under the BCA.

Common area means an area of common property.

Common property means the lot allocated to the body corporate for the community titles scheme.

Community titles scheme has the meaning given in section 10 of the Body Corporate and Community Management Act 1997.

Customer as defined in section 23(1) of the *Electricity Act 1994*:

a person who is a customer under the *National Energy Retail Law (Queensland) Act 2014 (Qld)*, section 5(1).

Designated local government area means:

- (1) the area of the local governments identified in schedule 1; or
- (2) for local governments not identified in schedule 1:
 - (a) the area identified in a local government planning scheme as a designated local government area for the purpose of this part of the QDC; or
 - (b) the area identified by a local government resolution as a designated local government area for the purpose of this code where notice of the resolution is published:
 - (i) in a newspaper that is circulating generally in the local government area; and
 - (ii) on the local government's website.

Electricity includes electric current, electrical energy and the like, and any related physical qualities.

Electricity meter means a device that measures and records the production or consumption of electricity.

Electricity sub-meter means a device that measures and records the production or consumption of electricity that either:

- (1) is a minimum accuracy class 1 building under AS 62053.21:2005; or
- (2) complies with AS 1284.1:2004.

Employee as defined in section 8 of the *Industrial Relations Act 2016*:

- (1) An employee is an individual who is employed, or usually employed, by an employer.
- (2) Also, employee includes the following persons—
 - (a) for chapter 2, part 3, divisions 9, 11 and 12, a national system employee within the meaning of the *Commonwealth Fair Work Act*, section 13, including a national system employee mentioned in section 30M of that Act;
 - (b) for chapter 7, a worker under the *Work Health and Safety Act 2011*, section 7, other than a worker under the *Commonwealth Fair Work Act* who may apply for an order under chapter 6, part 6-4B of that Act in relation to the bullying;
 - (c) a person who is a member of a class of persons declared to be employees under section 465;
 - (d) for a proceeding for an offence or for payment or recovery of amounts—a former employee;
 - (e) an outworker;
 - (f) an apprentice;
 - (g) a trainee.

End-of-trip facility means a facility within a building or on-site that is required to be constructed in compliance with P12(1).

Entrance means a main path into a building that is not for emergency use.

Floor area as defined in Schedule 1 to the BCA (NCC, volume 1 and volume 2):

For the purposes of—

- (1) *Volume One [of the BCA]—*
 - (a) *in relation to a building — the total area of all storeys; and*
 - (b) *in relation to a storey — the area of all floors of that storey measured over the enclosing walls, and includes—*
 1. *the area of a mezzanine within the storey, measured within the finished surfaces of any external walls; and*
 2. *the area occupied by any internal wall or partitions, any cupboard, or other built-in furniture, fixture or fitting; and*
 3. *if there is no enclosing wall, an area which has a use that contributes to the fire load or impacts on the safety, health or amenity of the occupants in relation to the provisions of the BCA; and*
 - (c) *in relation to a room — the area of the room measured within the internal finished surfaces of the walls, and includes the area occupied by any cupboard or other built-in furniture, fixture or fitting; and*
 - (d) *in relation to a fire compartment — the total area of all floors within the fire compartment measured within the finished internal surfaces of the bounding construction, and if there is no bounding construction, includes an area which has a use which contributes to the fire load; and*
 - (e) *in relation to an atrium — the total area of all floors within the atrium measured within the finished surfaces of the bounding construction and if no bounding construction, within the external walls.*
- (2) *Volume Two [of the BCA] and the ABCB Housing Provisions, in relation to a room, the area of the room measured within the finished surfaces of the walls, and includes the area occupied by any cupboard or other built-in furniture, fixture or fitting (see Figure 4).*

Full-time equivalents for workforce numbers include full-time aggregates of part-time and casual employee hours.

Hospital means a class 9a building as classified under the BCA.

Locker means a compartment for storage that can be securely locked.

Major addition means any addition to an existing major development that results in additional floor area of at least 1000 metres².

Major development means a:

- (1) *commercial office building with a floor area greater than 2000 metres²; or*
- (2) *shopping centre with a floor area greater than 2000 metres²; or*
- (3) *tertiary education facility with a floor area greater than 2000 metres²; or*
- (4) *hospital with a floor area greater than 2000 metres²; or*
- (5) *development specified in a local government planning scheme as a major development for the purposes of this part of the QDC.*

Note: Local governments may specify additional development to be major development.

Meter label means a label of white heat-resistant material with black lettering fixed by means of screws, rivets or glue that clearly identifies each meterable premises.

Meterable premises means:

- (1) *the sole-occupancy unit of a class 2 building or class 5 building that is or will be connected to a supply of electricity, except where a sole-occupancy unit in a class 2 building or class 5 building has, or will have, an electricity meter as a customer of a retail entity or special approval holder; or*
- (2) *each storey of a class 5 building that is or will be connected to a supply of electricity where more than one sole-occupancy unit for that storey has not been identified at the time of the building's development approval for building work, except where a storey of a class 5 building has or will have an electricity meter as a customer of a retail entity or special approval holder.*

NatHERS means *Nationwide House Energy Rating Scheme.*

NatHERS accredited software means *software accredited under NatHERS.*

Natural hazard management area (flood) means *an area designated as a natural hazard management area (flood) by a local government under the Building Regulation 2021, section 8.*

NCC means *the National Construction Code.*

New means *new building work and does not include renovations to an existing building.*

Occupants means *the number of persons accommodated in the building, as calculated in accordance with BCA (NCC, volume 1) Table D2D18 (Area per person according to use) and for the purposes of calculating occupants in schedule 3, 'hospital' means 'patient care areas', 'shopping centre' means 'shop', 'tertiary education facility' means 'school' and 'commercial office building' means 'office'.*

Outdoor living area means *a space in a class 1 building or sole-occupancy unit in a class 2 building that:*

- (1) *is directly accessible from, and attached to, a living area of the building such as a lounge, kitchen, dining and family rooms; and*
- (2) *has a minimum floor area of 12.0m² and a minimum dimension in all directions of 2.5 metres; and*
- (3) *is fully covered by an impervious roof; and*
- (4) *has:*
 - (a) *for a class 1 building – 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; or*
 - (b) *for a sole-occupancy unit in a class 2 building – at least one side open or capable of being readily opened, not including the connection between the internal living area and the outdoor living area.*

Performance criteria as defined in Schedule 10 to the Building Regulation 2021:

performance criteria, for building work, means the particular performance criteria for the building work stated in the QDC.

Performance requirement as defined in Schedule 2 to the Building Act 1975:

performance requirements means any of the following–

- (a) *the performance requirements under the BCA;*
- (b) *the performance criteria under the QDC;*
- (c) *the performance criteria under the QDC;*

- (d) a requirement for the assessment of building work for which a discretion may need to be exercised under this Act.

Queensland Development Code (QDC) as defined in section 13 of the Building Act 1975:

the parts, or aspects of the parts, of the document called 'Queensland Development Code' that are prescribed by regulation.

Relevant BCA provisions means Part H6 Energy efficiency in the BCA (NCC, volume 2).

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

Retail entity has the meaning given in the Electricity Act 1994.

Sanitary compartment as defined in Schedule 1 to the BCA (NCC, volume 1 and volume 2):

a room or space containing a loiset pan or urinal.

Shopping centre means premises comprising two or more individual tenancies that is comprised primarily of shops and which function as an integrated complex.

Shower means a separate and lockable compartment equipped with a showerhead.

Special approval holder as defined in section 57 and Schedule 5 to the Electricity Act 1994:

a special approval holder is a person who has a special approval.

Software rating means a star energy rating (out of 10 stars), calculated using NatHERS accredited software.

Sole-occupancy unit as defined in Schedule 1 to the BCA (NCC, volume 1 and volume 2):

a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

- (a) a dwelling; or
- (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
- (c) a room or a suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
- (d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any other area for the exclusive use of a resident.

Standard means the edition of Australian Standard AS 62053.21, AS 1284.1 and AS 2890.3 referenced by this QDC part.

Structure as defined in Schedule 2 to the Building Act 1975:

structure includes a wall or fence and anything fixed to or projecting from a building, wall, fence or other structure.

Storey as defined in Schedule 1 to the BCA (NCC, volume 1 and volume 2):

a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—

- (a) a space that contains only—
 - (i) a lift shaft, stairway or meter room; or
 - (ii) a bathroom, shower room, laundry, water closet, or other sanitary compartment; or

- (iii) accommodation intended for not more than 3 vehicles; or
 - (iv) a combination of the above; or
- (b) a mezzanine.

Tertiary education facility means a class 9b building that is in a university, college or similar establishment and does not include a primary or secondary school.

Total R-Value as defined in Schedule 1 to the BCA (NCC, volume 1 and volume 2):

The sum of the R-Values of the individual component layers in a composite element including any building material, insulating material, airspace, thermal bridging and associated surface resistances, expressed in metres².Kelvin/Watt or m².K/W.

Unisex design means suitable for any gender.

Water service as defined in Schedule 3 to the Water Supply (Safety and Reliability) Act 2008:

- 1 Water service means –
 - (a) water harvesting or collection, including, for example, water storages, groundwater extraction or replenishment and river water extraction; or
 - (b) the transmission of water; or
 - (c) the reticulation of water; or
 - (d) drainage, other than stormwater drainage; or
 - (e) water treatment or recycling.
- 2 For chapter 2, part 3 [of the Water Supply (Safety and Reliability) Act 2008], the term does not include a service supplied by infrastructure, if—
 - (a) the infrastructure is used solely for mining purposes; or
 - (b) the service is used only by—
 - (i) the owner of the infrastructure or the owner's guests or employees including, for example, guests at a resort; or
 - (ii) if the owner of the infrastructure is a body corporate for a community titles scheme, however described, established under an Act—the occupants of lots in the scheme.

Examples of body corporates for community title schemes—

- a body corporate under the Body Corporate and Community Management Act 1997
- a community body corporate or a precinct body corporate under the Mixed Use Development Act 1993
- the primary thoroughfare body corporate or the principal body corporate under the Sanctuary Cove Resort Act 1985

Water service provider as defined in Schedule 3 to the Water Supply (Safety and Reliability) Act 2008:

an entity 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.

Workforce numbers means the number of day-time employees that are full-time equivalents.

Chapter 2 Performance criteria and acceptable solutions

1 Energy efficiency – class 1 buildings

P1 Performance criteria

- 1) A class 1 building and an enclosed class 10a building attached to a class 1 building must comply with performance requirements H6P1 and H6P2 in the BCA (NCC, volume 2).

A1 Acceptable solution

- 1) A1(2) applies in addition to the acceptable solutions provided under H6D1 in the BCA (NCC, volume 2).
- 2) A class 1 building and an enclosed class 10a building attached to a class 1 building complies with P1 if it:
 - (a) complies with the requirements identified in 3.12.0(a)(ii) in the BCA 2019 (NCC 2019, volume 2) and
 - (b) obtains a nominal credit under A1(6) of 1 star.
- 3) A building that complies with A1(2) is deemed to be equivalent to a 7-star NatHERS rating.
- 4) For applying S42C2 in the BCA (NCC, volume 2), a reference to climate zones 1 and 2 is taken to be a reference to climate zones 1, 2, 3 or 5.
- 5) A1(6) applies to the calculation of nominal credit for an outdoor living area.
- 6) The following nominal credits apply if a building includes an outdoor living area that complies with:
 - (a) S42C2(1)(b) referred to in the BCA (NCC, volume 2) – 0.5 stars.
 - (b) S42C2(1)(c) referred to in the BCA (NCC, volume 2) – 1 star.

2 Energy efficiency – class 2 buildings

P2 Performance criteria

- 1) Sole-occupancy units in class 2 buildings must comply with performance requirements J1P2 and J1P3 in the BCA (NCC, volume 1).

A2 Acceptable solution

- 1) A2(2) applies in addition to the acceptable solutions identified in J2D2(2) in the BCA (NCC, volume 1).
- 2) For the purposes of calculating the average software rating for the elemental provisions in J3D3(1)(a)(i) in the BCA (NCC, volume 1), for all sole-occupancy units of a class 2 building in BCA climate zones 1, 2, 3 and 5, the following nominal credits apply towards the software rating for each sole-occupancy unit:
 - (a) 0.5 stars where a sole-occupancy unit includes an outdoor living area fully covered with an impervious roof having a total R-Value greater than or equal to 1.5 (for downward heat flow); or
 - (b) 1 star where a sole-occupancy unit includes an outdoor living area fully covered with an impervious roof having a total R-Value greater than or equal to 1.5 (for downward heat flow) and has at least one permanently installed ceiling fan or fans with a speed controller that serves the whole floor area.
- 3) For A2(2)(a) and A2(2)(b), the floor area a fan serves must not exceed:
 - (a) 15 metres² if it has a blade rotation diameter of less than 1200 millimetres; and
 - (b) 25 metres² if it has a blade rotation diameter of greater than or equal to 1200 millimetres.

- 4) To achieve a credit under A2(2)(b), an air-conditioner that services any room directly adjacent to an outdoor living area must automatically shut down when an external door that provides access to the outdoor living area is open for more than 1 minute.

[NB: P3 to P6 not required]

3 Water conservation

P7 Performance criteria

- 1) In a class 1 or class 2 building, in an area serviced by a water service provider, toilet cisterns and bowls must facilitate the efficient use of water.

A7 Acceptable solution

- 1) In a class 1 or class 2 building, in an area serviced by a water service provider, all toilet cisterns:
 - (a) have a dual flush function and have a minimum 4-star WELS rating; and
 - (b) are compatible with the size of the toilet bowl to allow for proper functioning of the toilet.

Note: All other water efficiency requirements are set out in B1D2 of the Plumbing Code of Australia.

[NB: P8 not required]

4 Electricity sub-metering

P9 Performance criteria

- 1) The electricity supplied to each meterable premises is able to be measured.

A9 Acceptable solution

- 1) Each meterable premises has an electricity sub-meter installed which measures only the electricity supplied to that meterable premises.

P10 Performance criteria

- 1) An electricity meter must be located so it is easy and safe to read and maintain at any reasonable time.

A10 Acceptable solution

- 1) The electricity sub-meter is:
 - (a) installed in a common area; and
 - (b) free of hindrance or obstruction to a person authorised to read and/or maintain the electricity sub-meter.

P11 Performance criteria

- 1) The electricity meter for each meterable premises must be labelled to indicate which meterable premises it is associated with.

A11 Acceptable solution

- 1) A meter label identifying which meterable premises it is associated with is affixed or located adjacent to the electricity sub-meter for each meterable premises.

5 End-of-trip facilities

P12 Performance criteria

- 1) End-of-trip facilities are provided for employees or occupants, in a building or on-site within a reasonable walking distance, and include:

- (a) adequate bicycle parking and storage facilities; and
 - (b) adequate provision for securing belongings; and
 - (c) change rooms that include adequate showers, sanitary compartments, wash basins and mirrors.
- (2) Despite P12(1), there is no requirement to provide end-of-trip facilities if it would be unreasonable to provide these facilities having regard to:
- (a) the projected population growth and forward planning for road upgrading and development of cycle paths; or
 - (b) whether it would be practical to commute to and from the building on a bicycle, having regard to the likely commute distances and nature of the terrain; or
 - (c) the condition of the road and the nature and amount of traffic potentially affecting the safety of commuters.

A12 Acceptable solution

- 1) Bicycle parking and storage facilities are:
 - (a) easily accessible and provided in a building, or on-site within 100 metres of an entrance to a building, in accordance with:
 - (i) five percent (5%) of the number of employees, based on workforce numbers;
 - (ii) the occupant ratios in schedule 3 (rounded up to the nearest whole number); and
 - (b) designed and constructed in compliance with AS 2890.3 (including modifications as specified in schedule 2).
- 2) Lockers are:
 - (a) provided in a building, or on-site within 100 metres of an entrance to a building, on a 1.6:1 ratio for every bicycle parking space; and
 - (b) co-located or located within 50 metres of change rooms required by A12(3); and
 - (c) provided with minimum dimensions of 900 millimetres (height) x 300 millimetres (width) x 450 millimetres (depth).
- 3) Change rooms:
 - (a) are provided in a building, or on-site within 100 metres of an entrance to a building and comply with schedule 4, table A, column B; and
 - (i) are fitted with a lockable door or otherwise screened from public view; and
 - (ii) are located within 100 metres of bicycle parking and storage facilities required by A12(1) if the bicycle parking and storage facilities and change rooms are not located in a building.
- 4) Change rooms provide:
 - (a) showers that:
 - (i) are located within change rooms and meet schedule 4, table A, column C; and
 - (ii) have a minimum 3-star WELS rating shower head; and
 - (iii) dispense both hot and cold water; and
 - (b) sanitary compartments that:
 - (i) are located within change rooms, and meet schedule 4, table A, Column D; and
 - (ii) are constructed in compliance with F4D4 and F4D8 of the BCA (NCC, volume 1); and
 - (c) wash basins that are located within change rooms and meet schedule 4, table A, Column E; and
 - (d) a mirror located above wash basins; and
 - (e) a hook and bench seating located within each shower compartment; and
 - (f) a socket-outlet located adjacent to each wash basin.

- 5) Where change room requirements are predominantly located in a carpark or on a basement floor that is not regularly used by occupants or employees, they may not be counted towards the requirements of Part F4 in the BCA (NCC, volume 1).
- 6) Despite A12(1) to A12(4), a local government planning scheme may require additional bicycle parking and storage facilities, locker facilities, change rooms, showers, sanitary compartments, wash basins and mirrors.

Notes:

For A12(1)(a) – the occupant ratios may be used where employees based on workforce numbers cannot be determined accurately.

For A12(6) – it is recommended that in all cases confirmation be obtained from the relevant local government as to whether it has any end-of-trip facility requirements for a building in its planning scheme.

Schedule 1 – Designated Local Governments

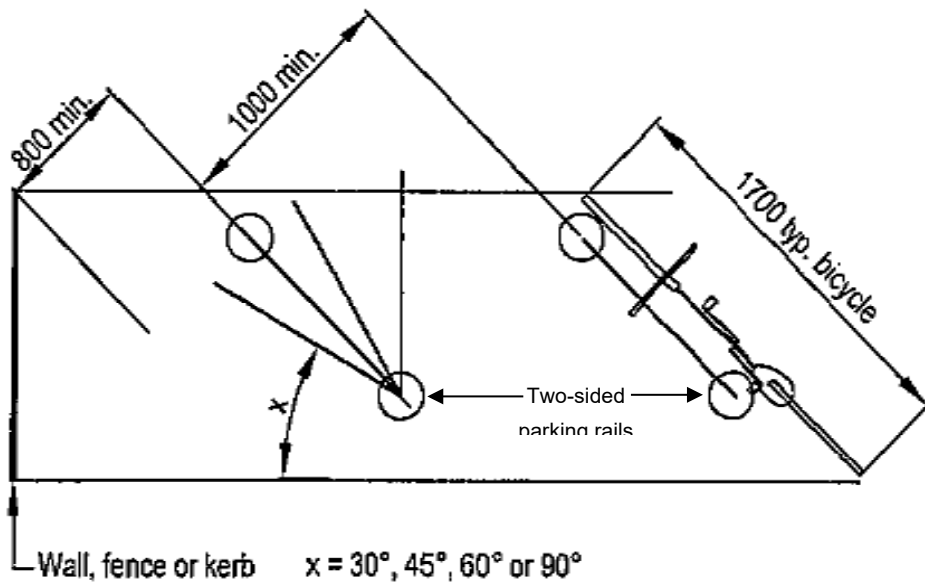
Below are a list of designated local governments:

- Brisbane City Council
- Bundaberg Regional Council
- Cairns Regional Council
- Central Highlands Regional Council
- Fraser Coast Regional Council
- Gladstone Regional Council
- Gold Coast City Council
- Gympie Regional Council
- Ipswich City Council
- Livingstone Shire Council
- Logan City Council
- Mackay Regional Council
- Moreton Bay Regional Council
- Mount Isa City Council
- Noosa Shire Council
- Redland City Council
- Rockhampton Regional Council
- Southern Downs Regional Council
- Sunshine Coast Regional Council
- Toowoomba Regional Council
- Townsville City Council
- Western Downs Regional Council

Schedule 2 – AS 2890.3:1993 modifications

Standard clauses affected	Standard modifications
2.2.4	In addition to 2.2.4: <ul style="list-style-type: none"> Vertical storage can also comprise alternative bicycle storage area requirements that are available within the marketplace (e.g. wall mounted rails and racks, pods).
2.2.6	In addition to 2.2.6: <ul style="list-style-type: none"> Open plan storage layouts can also comprise alternative bicycle storage area requirements that are available within the marketplace (e.g. double parker/double storey parking systems, pods).
Figure 2.1	Figure 1 also applies in addition to Figure 2.1.

Figure 1



Schedule 3 – Occupant ratios

(A) Building type	(B) Bicycle spaces	(C) Security classification Refer to AS 2890.3:1993, Table 3.1
<i>Commercial office building</i>	1 per 30 occupants	2
<i>Shopping centre</i>	1 per 500 occupants	2
<i>Tertiary education facility</i>	1 per 375 occupants	2
<i>Hospital</i>	1 per 100 occupants	2

Schedule 4 – Change room requirements

Table A

(A) Change room requirements based on bicycle parking spaces	User group	(B) Change room provisions	(C) Number of showers required	(D) Number of sanitary compartments required	(E) Number of wash basins required
1 – 5	Female and male	1 change room of unisex design	1	1 closet pan	1
6 – 19	Female and male	1	1	1 closet pan	1
20 or more	Female	1	2, plus 1 additional shower for every 20 bicycle parking spaces provided thereafter*.	2 closet pans, plus 1 additional sanitary compartment for every 60 bicycle parking spaces provided thereafter*.	1, plus 1 additional wash basin for every 60 bicycle parking spaces provided thereafter*.
	Male	1	2, plus 1 additional shower for every 20 bicycle parking spaces provided thereafter*.	1 urinal and 1 closet pan, plus 1 additional sanitary compartment at the rate of 1 closet pan or 1 urinal for every 60 bicycle parking spaces provided thereafter*.	1, plus 1 additional wash basin for every 60 bicycle parking spaces provided thereafter*.

* Refer to **Table B** for example of workings.

Table B

Change room requirements based on bicycle parking spaces	User group	20–39 <i>bicycle</i> parking spaces	40–59 <i>bicycle</i> parking spaces	60–79 <i>bicycle</i> parking spaces	80–99 <i>bicycle</i> parking spaces	100–119 <i>bicycle</i> parking spaces
Number of showers required	Female and male	2	3	4	5	6
Number of sanitary compartments required	Female and male	2	2	2	3	3
Number of wash basins required	Female and male	1	1	1	2	2