



Design Manual  
for housing at  
Perradenya Estate  
Caniaba

Compiled for Rous Water by:  
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## Introduction

"Caniaba Village will be an ecologically sustainable settlement, an eco-village of energy efficient healthy housing and facilities ... providing a real sense of place and belonging for residents, who live in relative harmony with the natural environment they actively care for ..."

Situated near Lismore, in NSW's lush northeastern corner, the Caniaba satellite village rests on a volcanic plateau that forms part of a series of ancient basalt flows between 50 and 200 metres above sea level. As part of Caniaba, Rous Water aims to create a low-impact housing development using sound environmental and sustainable development principles. This is the community of Perradenya.

The Perradenya development, always sensitive to the environment, will comprise up to 200 houses and will connect to education and employment centres by upgraded and extended bus services. Good walking and cycling access, as well as excellent community facilities, add to the overall integration.

Housing at Perradenya will maintain a cohesive, village-like appearance, taking into account not only the surrounding environment, but the needs of residents who will be encouraged to participate actively in the management of their environs.

As part of its overall aim of sustainable development, Rous Water is encouraging the development of 'energy- and water-smart' houses that incorporate these principles.

A key feature of Perradenya is Rous Water's innovative scheme for water efficiency which will give homeowners a choice of town, rain and reclaimed water sources.

## Energy and Water efficiency

Energy efficient houses are ones that, through their design, construction and choice of materials and appliances, maximise the use of sunshine, and use less energy more efficiently.

Passive solar design means your house doesn't actually have to 'do' anything. Simply through its good design (orientation, window placement, shading etc.) it will preserve energy, reduce environmental damage and save you money.

Energy efficiency principles apply not only to orientation for wind and sun, thermally clever building materials, insulation, wise use of glazing and breezeways, but also to services such as lighting, hot water, heating and cooling, and even to landscaping.

Good design and energy efficiency also means the wise use of water: minimising wastage and using and recycling rain and already-used water wherever possible.

Energy and water efficient housing design creates homes which:

- use less energy and water
- are more comfortable to live in
- cost less to run
- contribute to an overall reduction in greenhouse gas emissions
- save Australia's most precious resource - water

Use this manual before and at the design stage of your house to achieve maximum efficiency and comfort for you and your family during both summer and winter.

[This manual outlines and details general guidelines only. Each house has its own thermal dynamism dependent on a combination of varying components and as such performs uniquely. Energy efficiency is dependent on correct assemblage of these varying components, and cannot always be accurately predicted.]

## How to use this Manual

### **Scope and Structure of the Manual**

This manual has been written to assist land purchasers, architects, designers and builders in understanding and applying the principles of energy and water efficiency that Rous Water wishes to promote at Perradenya. For ease of use it is divided into three parts which provide different levels of information. It is presented in a sequence that closely follows the design process.

### Part A

#### **Summary of Design Guidelines**

Offers an overview of energy and water efficient principles, setting out the main issues and considerations needed to undertake the design process. It is set out in sections prefixed by A, eg A1, A2 etc.

### Part B

#### **Detailed Design and Technical Methods**

Set out under the same headings and numbering system as Part A, Part B is a more detailed, technical section offering a more thorough guide to energy- and water-efficient design and building methods.

### Part C

#### **Reference and Research**

Offers lists of reference sources such as books, journals and websites, as well as materials and product information which will allow further research.

# Table of Contents

<b>Introduction</b>
Energy and Water Efficiency
How to Use this Manual
Table of Contents
<b>Part A - A Summary of Design Guidelines</b>
<b>A1 - House Siting and Access to the Sun</b>
The Sun
Building orientation
Internal planning
<b>A2 - Windows and Natural Light</b>
Window design
Window shading
Sun angles during the year
<b>A3 - Breezes and Ventilation</b>
Ventilation
Stack ventilation
Cross ventilation
Heat Retention in Winter
<b>A4 - Heat Absorbing Building Materials</b>
Heating and cooling using thermal mass
<b>A5 - Insulation</b>
Principles of using insulation
Recommended insulation tips
<b>A6 - Water Efficiency</b>
Rous Water's strategy
Water efficiency
<b>A7 - Hot Water, Lighting and Appliances</b>
Hot water systems
Lighting
Appliances
Other Services
<b>A8 - Landscaping</b>
Xeriscape gardens
<b>A9 - Energy Rating</b>
NATHERS energy ratings
<b>A10 - Building Materials</b>
Building covenants
Ecologically sustainable materials
Preferred materials
<b>Part B - Technical Design Guidelines</b>
<b>B1 - House Siting and Access to the Sun</b>
Movement of the sun
Locating the position of the sun
Siting for solar radiation
Thermal comfort
<b>B2 - Windows and Natural Light</b>
Window design and treatment
Principles of window design and shading
Heat flow through glass
Summer and winter heat gains
Winter heat losses

Orientation of windows
Optimum area of glass
North, east and west window areas
South window areas
Shading windows
Effects of shading devices
Fixed or adjustable external shading
Treated glass as an alternative to shading
Skylights, clerestory windows and roof glazing
Summer heat gains
Winter heat loss
<b>B3 - Breezes and Ventilation</b>
Air movement
How the control of air movement saves energy
Draught proofing
Ventilation
Principles of cooling by ventilation
Designing for good ventilation
Air quality
<b>B4 - Heat Absorbing Materials</b>
Thermal mass
Understanding thermal mass
Seasonal effects of thermal mass
Summer
Winter
Negative winter effects
Where to locate thermal mass
Inside the insulated building envelope
Concrete slab on ground
Where winter sun can strike
Inside north facing rooms
In rooms that become hot in summer
Locate masonry fireplaces on internal walls
How much thermal mass?
The effect of floor coverings, colour and texture
Soft floor finishes
Hard floor finishes
Colours
Textures and surfaces
Special construction types
Mud brick
Reverse brick veneer
Two storey houses
<b>B5 - Insulation</b>
General
Benefits of insulation
Heat transfer
Use of insulation
Insulation product types
Measuring insulation performance
R Values
Overall R Value
Added R Value

Thermal bridging
U Values (reciprocal of r Values)
Condensation and insulation
Condensation on interior surfaces
Selecting insulation products
Health and safety
Fibreglass, rockwool and cellulose fibre
Fire safety
Installation guidelines
Principles of installation
Clearance around appliances and fittings
Installation in ceilings
Flat ceilings with pitched roofs
Ceilings with exposed rafters
Ceilings with concealed rafters
Wall sections between ceilings
Installation in external walls
Vapour barriers
Sealed air space with reflective insulation
Framed walls: weatherboard and brick veneer
Framed walls with reflective foil batts
Brick or weatherboards with bulk insulation and reflective foil
New cavity brick wall with bulk insulation within the cavity
Solid walls: brick, mud brick or concrete
Insulation for floors
<b>B6 - Water Efficiency</b>
General
Household water usage
Domestic use percentages
Rating water efficiency
In the house
Outside the house
<b>B7 - Hot Water, Lighting and Appliances</b>
General
The right selection can save energy
Choosing the energy source
Energy rating labels
Heating the house
Establish heating requirements
Matching the type of heat to the purpose
Heat shifters
Locating the heater
Sizing the heating system
Types of heating systems
Cooling the house
Types of cooling systems
Water heating
Comparison of fuels for water heating
Sizing the hot water storage system
Types of water heaters
Storage and instantaneous systems
Design principles
Selection considerations

Instantaneous water heaters
Lighting
Designing household lighting
Types of lamps
Lighting for different areas
Appliances
<b>B8 - Landscaping</b>
General
Landscape design and saving energy
Integrating landscape with the building design
Site and microclimate analysis
Design response
Summer shading
Winter sun penetration
Reducing glare and ground temperature
Wind control
Blocking cold winds
Selection of plants
Xeriscape gardens
Principles of Xeriscape gardens
Plants lists
<b>B9 - Energy Rating</b>
NatHERS energy ratings
<b>B10 - Building Materials</b>
List of Appendices for Part B
Appendix BI - Approximate sun chart for Lismore
Appendix BII - Glass area as a percentage of floor area
Appendix BIII - Insulation types and applications
Appendix BIV - Heater selection guide
Appendix BV - Hot water systems
Appendix BVI - Lighting recommendations
Appendix BVII - Recommended trees and shrubs
Appendix BVIII - Ecological sustainability of building materials
Appendix BIX - Building assemblies
Appendix BX - BES index charts A, B and C
Appendix BXI - Residential construction materials
Appendix BXII - Pine products and treatments
Appendix BXIII - Guide to timber species
<b>Part C - References and Further Resources</b>
<b>C1 - Books and Publications</b>
<b>C2 - Contact List</b>
<b>C3 - Websites</b>
List of Appendices for Part C
Appendix CI - Wind frequency analysis for Lismore
Appendix CII - Wind roses for Lismore
Appendix CIII - Climatological summary for Lismore