



# Introduction

to Townsville's Sustainable Housing Guides

A sustainable home is more than just a catch phrase. It is a comfortable, low-impact, modern, money-saving investment in your future.

A sustainable home responds to its climate and surrounding environment. It uses water, electricity and other resources more efficiently which results in a cheaper to run and less wasteful home.

There are many different definitions for “sustainable”, which can get confusing. The term originally applied to natural resource use with a long term focus. Today, it applies to many disciplines and aspects of life.

The guides in this kit provide ideas for improving existing homes and designing new homes to be more energy-efficient and climate-responsive. Including these aspects into the home will lessen its impact on the environment and be more cost-effective in the long term.

The guides have been produced in three groups. The following is an overview of the information found in each of the guides within the kit:

- Group A. Climate-responsive design for Townsville - Guides 1 to 6;
- Group B. Enhancing sustainable performance - Guides 7 to 10;
- Group C. Other sustainable practices - Guides 11 and beyond.

The guides can be used individually or, ideally, together in an overall integrated approach to sustainability.

## Group A. Climate-Responsive Design for Townsville

The first six guides in this kit focus on key design features that are the most important aspects of an energy-efficient Townsville home. Within the first six guides, the capture of breezes and shading stand out as the two most essential design principles for Townsville.

### Guide 1 Orientation for Townsville Homes

Understand why orientation is an important overall design principle.



Photo: eco SAVVY

Aspects include:

- information on Townsville's location and climate including prevailing breeze directions and sun angles;
- how and why orientation is important to overall comfort; and
- examples of house designs with good orientation on sites with varying solar aspects.

### Guide 2 Harnessing Cooling Breezes

Discover the importance of air movement and breeze capture in Townsville for maintaining personal comfort.

Get advice on:

- orientation and openings to make the most of natural breezes;
- using convective cooling to remove heat; and
- the multiple benefits provided by ceiling fans.

### Guide 3 Shading Out the Heat

Find out how to effectively protect your home from the scorching Townsville sun.



Photo: TCC

Learn:

- effective shading from the midday and low-angle morning and afternoon sun;
- a variety of shading methods for each side of the home; and
- other helpful shading tips.

### Guide 4 Landscaping: An Integral Aspect of Sustainability

Find out how landscaping can help to cool your home and increase your enjoyment of both indoor and outdoor living spaces.

Use basic landscaping principles to:

- contribute to shading;
- promote breezes; and
- reduce the temperature in and around your home.

## Guide 5 Building Materials and Insulation for Townsville Homes

Choose building materials to achieve a naturally cool home and avoid living in an oven.

Your choice of materials can:

- keep out the heat during the day; and
- help your home to cool down quickly at night.

## Guide 6 Enhance Outdoor Living

Great outdoor living spaces are fundamental for embracing Townsville’s lifestyle.



Photo: Kelly Goodbun

Be inspired by innovative design ideas to:

- maximise the use of outdoor areas through correct location;
- integrate the indoor and outdoor environments; and
- convert ‘transitional spaces’ to breezeways.

## Group B. Enhancing Sustainable Performance

The second group of guides in this kit focus on ways to enhance the sustainable performance of a home. They can be implemented in the building of a new home or used to improve an existing home.

## Guide 7 Water Heating

On average, heating water is the biggest, ongoing electricity consumer in the home.

Reduce costs by learning:

- some of the different types of hot water systems and how they work; and
- good options for different circumstances.

## Guide 8 Energy Reduction and Generation

Energy use in the home, and the issues surrounding its production, has become the focus for change around the world.

Discover:

- methods to reduce energy consumption around the home; and
- options for generating your own electricity.

## Guide 9 Greener Gardening

Creating a sustainable garden will give you a functional, low-maintenance and productive yard.



Photo: eco SAVVY

Learn and understand:

- how to reduce your watering and maintenance needs;
- ways that your garden can contribute to cleaner creeks in the area; and
- the benefits of growing some of your own produce.

## Guide 10 Water Collection, Saving and Re-use

Water is a valuable resource that should never be taken for granted.

Find out ways to:

- use water more efficiently around the home;
- re-use water safely; and
- harvest your own water.

## Group C. Other Sustainable Practices

The third group of guides in this kit will cover a variety of other energy-efficiency and sustainability issues.



### FACT 1

Homes that are well-designed to suit Townsville’s climate can come in all kinds of shapes, sizes and styles and should not cost more, within reason, than the average home.



Photo: eco SAVVY



Photo: eco SAVVY



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