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... This community project is brought to you by Mundingburra Inc and has been endorsed by the Sustainable Homes Program.

Rotary had two clear intentions when commencing this project; to raise funds for charity and to educate the public about sustainable housing practices. The home has been designed using Smart Housing Design Objectives and incorporates sustainable housing design concepts and technologies suitable for the Dry Tropics region, including passive design and energy efficiency. It also responds to its occupants changing lifestyle needs.

The major beneficiary of the proceeds from the sale of the property will be Spinal Injuries North Queensland. The Club has also chosen to support five other organisations with proceeds from the sale; these include the Life Education Unit, Rotary Overseas Medical Aid for Children, Volunteer Coastguard (Townsville Flotilla), Foodbank and the Townsville Community Learning Centre.

Rotary intends this project to be a business model which will be repeated in future years on other sites. Mundingburra Rotary would like to thank everyone who has supported this project since its inception two years ago.

**The Rotary Sustainable House will be auctioned at 12 noon, Saturday the 27 October, 2007.**

For additional sales information please contact Cameron Weller from Colliers International on 0417 627 859 or Kirsty Bradley on 0413 527 237

# Rotary Sustainable Home

## KIRWAN | Self Guided Tour



### Cnr Rochford St & Burford Crt, Willowbank, Kirwan

An initiative of the Rotary Club of Mundingburra in partnership with Government, local business and community groups.

Opening hours: Sunday 9 September - 10am to 4pm, Sustainable House Day  
Saturdays and Sundays - 2pm to 5pm, September 15 to October 21

For more details about sustainable housing visit:

[www.sustainable-homes.org.au](http://www.sustainable-homes.org.au)

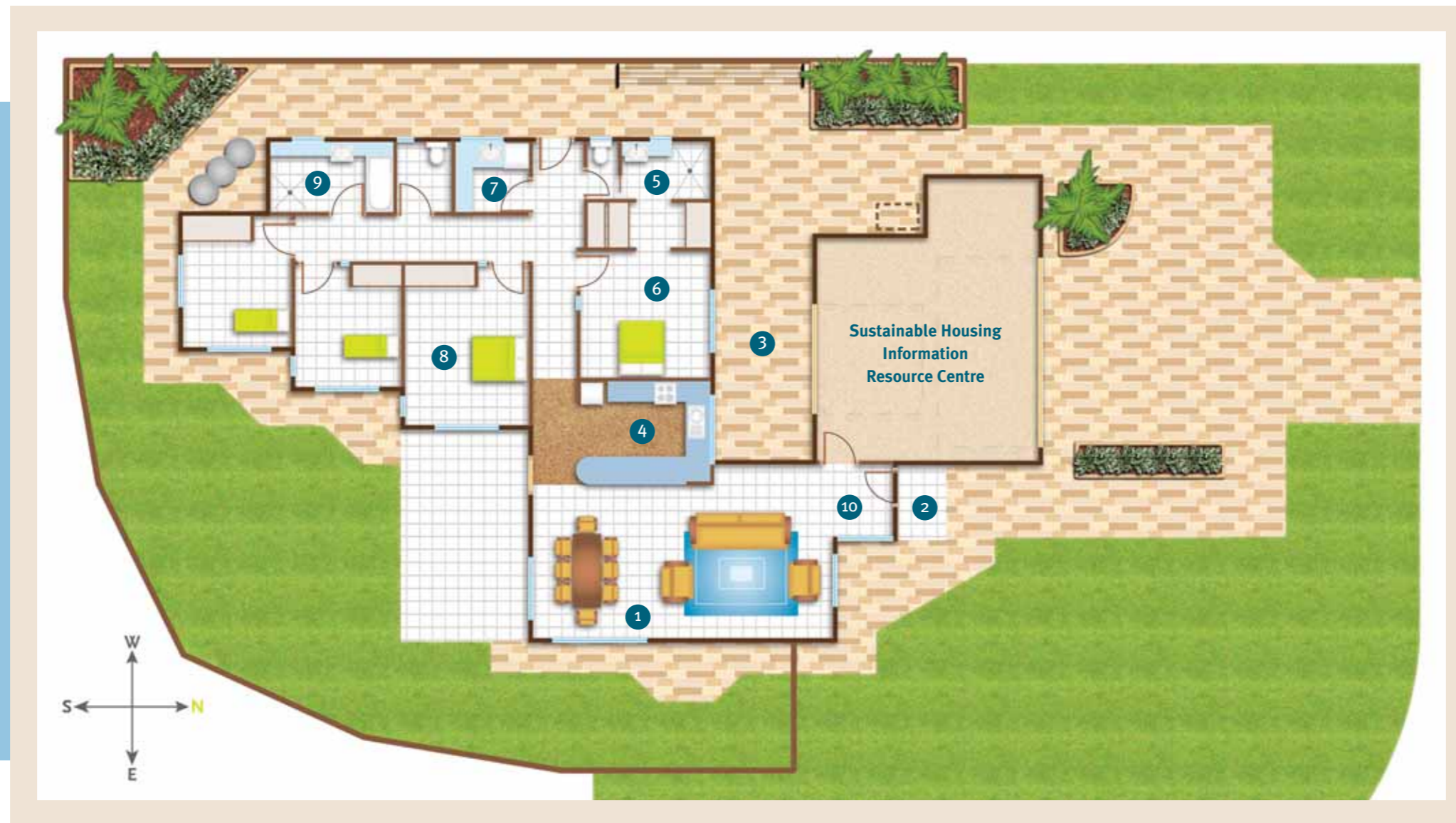
[www.smarthousing.qld.gov.au](http://www.smarthousing.qld.gov.au)

[www.thuringowa.qld.gov.au](http://www.thuringowa.qld.gov.au)

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Rotary Sustainable Home Kirwan is a four bedroom, two bathroom family home that has been designed to demonstrate sustainable housing design concepts and technologies suitable for the dry tropics region. Many of these features can be incorporated into existing homes or included in the design of new homes.



The home has been designed for comfort, flexibility and liveability. It is naturally cool, has significantly less need for airconditioning, is efficient in its use of energy and water and has been designed to be safe, flexible and easy to use by people of all ages and abilities.

### 1. Passive design (for tropical climate)

- orientation
  - living areas located to benefit from prevailing breezes (from NE & SE)
  - utility areas (garage, bathroom, toilet, ensuite and laundry) in west
- natural ventilation
  - three openings provided to most rooms
  - pod-style design (ie garage separate from main house)
  - extensive use of louvres in internal and external walls
  - higher ceilings (2700mm compared to average 2400mm)
- heat gain reduced through material selection and design
  - timber framed wall construction with reflective foil insulation
  - external wall cladding/aerated concrete panel (Hebel) or Weathertex
  - colourbond roofing - light coloured and insulated (R2.5)
  - light coloured external walls
  - wider eaves (725mm)
  - sunshades above some windows
  - grey tinted glass
  - tile internal flooring

### 2. Integration of indoor / outdoor living

- excellent relationships between internal and external living areas
- multiple outdoor living areas provided

### 3. Material choices

- low thermal mass (hebel and Weathertex) walls
- tile, cork and epoxy-resin flooring
- laminate cabinetry and benchtops
- LOSP treated timber for roof and wall framing, skirting, architraves (avoids need for additional termite treatment or barriers)

### 4. Flexible use

- multiple purpose 'garage' space - suitable for a variety of uses eg car storage, workshop, entertaining area, hobbies with
  - dual access roller doors
  - enhanced thermal comfort (ceiling lining, roof insulation, ceiling fans and excellent natural ventilation)
  - epoxy-resin floor finish (attractive, non-slip and non-staining)
- telecommunications outlets to all living and bedrooms
- excellent storage areas adequate (5m2 storeroom, wheelie bin nook) and fully adjustable shelves, drawers and clothes rails

### 5. Water efficiency

- WELS 3-star rated showerheads (9L/min)
- WELS 3-star rated mixer taps (9L/min)
- WELS 4-star rated dual flush toilets (3L/4.5L)
- low water use plant species in garden beds
- automatic, zoned irrigation system
- 3000 litre rainwater tank

### 6. Energy efficiency

- passive (tropical) design for thermal comfort significantly reducing need for air-conditioning
- bedrooms /living areas can be closed off (ie zoned) for efficient air-conditioning
- ceiling fans installed extensively (including to patio and garage)
- inverter (individual) split system air-conditioners
- solar hot water system (manual operated electric booster)

- designed for natural daylighting
- energy efficient lighting
- 'controlled hours' tariff 33 electricity supply (for hot water and air-conditioning)
- external clothesline (avoids need for electric clothes drying)
- greenpower electricity supply (Clean Energy from Ergon)
- north facing roof area for future installation of photovoltaic panels

### 7. Safety

- slip resistant floor finishes
- level (step-free) thresholds throughout
- step-free (hobless) showers
- bath is provided separately to shower
- lever taps with temperature control mechanism
- children's play areas visible from living areas
- reversing bay in driveway avoids reversing onto street
- insect screens to all windows and doors
- floors selected to avoid allergies

### 8. Universal design – accessibility

- level (step-free) thresholds throughout (and gentle ramps where required)
- wider corridors (1200mm wide compared to average 900mm wide)
- wider doorways (920mm wide door compared to average 820mm door)
- fully wheelchair accessible bedroom, bathroom and toilet
- wide, paved pathway (1120mm) around outside of home

### 9. Universal design – easy use by all

- covered front and rear entries
- lever door handles
- D-shaped cupboard handles
- flick mixer taps
- fittings at easily accessible heights (door handles, light switches, powerpoints)
- large format tiles (easier cleaning)
- bathroom cabinetry (easy access)
- bathroom walls reinforced (for later installation of grabrails)
- fold down seat in shower

### 10. Security

- front entry is visible from the street
- sensor lighting to driveway, garage, front porch and front garden
- low fence (1200mm) enables casual surveillance of street from living areas
- security screens fitted to all windows and doors
- door locks are keyed alike
- remote-controlled garage door
- remote-controlled security system