

# Towards Sustainable Residential Development

## Local Planning Policy

**VERSION 2**

December 2015

town planning services

Version	Adoption	Comment
1	15 June 2010 Council Item SC167	Draft.
1	7 September 2010 Council Item SC184	Final.
1	1 July 2011 Council Item SC001	Final – Readopted under the new City of Greater Geraldton.
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## 1.0 CITATION

This is a local planning policy prepared under the *Planning and Development (Local Planning Schemes) Regulations 2015* and the City of Greater Geraldton Local Planning Scheme No. 1 ('the Scheme'). It may be cited as the *Towards Sustainable Residential Development local planning policy*.

The local government may prepare a local planning policy in respect of any matter related to the planning and development of the Scheme area. In making a determination under the Scheme the local government must have regard to each relevant local planning policy to the extent that the policy is consistent with the Scheme.

## 2.0 BACKGROUND

*State Planning Policy 3.1 – Residential Design Codes (the R-Codes)* includes provisions for decision-makers to prepare local planning policies to alter certain development standards of the R-Codes where a specific local need arises. The R-Codes also acknowledge that applications with proposals which do not satisfy the deemed-to-comply provisions of the R-Codes may need to rely more specifically on local housing requirements and design objectives.

This policy provides local housing objectives and varies relevant deemed-to-comply provisions of the R-Codes to assist in their implementation. It should be read in conjunction with the R-Codes.

## 3.0 OBJECTIVES

- a) To enable sustainability principles to be applied in the assessment of residential developments.
- b) To assist achieving more sustainable residential developments by making concessions in particular cases on any design principles of the R-Codes (with the exception of housing density and building height requirements).
- c) To encourage the development of more sustainable, environmentally sensitive and contemporary residential buildings of a high design quality.
- d) To encourage developments, more sustainable than those of the previous era, in recognition of growing commercial benefits, community demand, increased individual and community vulnerability to climate changes and energy price increases.
- e) To permit and encourage diverse and innovative housing forms that demonstrate sustainability outcomes so as to promote a wider choice in housing and satisfy the demand of a variety of household types and lifestyles.

## 4.0 POLICY MEASURES

### 4.1 Application of Policy

- 4.1.1 This policy applies to all residential development regardless of zoning.

4.1.2 It is intended that this policy may be used to justify variations to any other policy, design guidelines, local development plan and the like (with the exception of height and density requirements) and should be used in conjunction with the R-Codes.

An example would be where a residential development seeks a reduced front setback due to the space requirements needed for a rainwater tank or a reduced side setback is requested in order to achieve greater solar orientation.

4.2 Wind Energy Systems

Wind energy systems should comply with the following:

<b>Capacity</b>	2Kw maximum
<b>Height</b>	Pole Mounted: 9m total height above NGL maximum  Roof Mounted: 3m total height above roofline maximum 1m clearance from roofline minimum
<b>Diameter</b>	2m blade diameter maximum
<b>Boundary setbacks (side &amp; rear)</b>	The system should not be located in front of a dwelling or in the primary street setback area.  Pole Mounted: The setback from boundaries should not be less than the total height of the wind energy system.  Roof Mounted: No minimum setback from boundary, however should be located minimum of 7.5 metres from major opening of adjoining dwelling.
<b>Appearance</b>	The system should remain painted or finished in the original manufacturers finish unless coloured to match the existing roof.

4.3 Consultation

Any variation to the above development standards will be advertised in accordance with the Scheme requirements.

4.4 Variations

The provisions in this policy should not restrict advances in renewable energy technology being implemented. Where a proposal does not meet the specific requirements of this policy, discretion shall be applied in determining any development application in accordance with the objectives of this policy.

4.5 Building Orientation

A building should be so orientated on a site to ensure indoor and outdoor living areas face the north. A northern orientation will enable benefits of natural solar heating and daylight are maximised in the cooler months. Conversely, negative aspects of heat gain during warmer months can be minimised.

#### 4.6 Energy Efficiency

Particular design features can be used to complement appropriate solar orientation of building(s) on a site. They can also be used to compensate for poor site orientation. The residential development should aim to have:

- a) A higher than minimum standard as set in the applicable building standards for the building envelope or show evidence that the design achieves, and will perform to, a higher standard than the minimum.
- b) Majority of glazed areas located on north facing walls with little or no glazing to east and west facing walls. South facing openings to allow for efficient cross ventilation. Alternatively design glazing to prevent solar and thermal heat gain.
- c) Extended eaves or other such features such as patios or pergolas located appropriately near north facing windows of habitable and living rooms to minimise excessive heat gain in summer months, without compromising beneficial solar heat gain in winter months.
- d) Materials of high thermal mass incorporated into the design, such as concrete slab on ground and masonry internal walls with well insulated ceilings (unless designed thermal mass construction is used), external walls to help stabilise internal temperatures in hot months and absorb and re-radiate heat in colder months.
- e) Other features such as verandahs, solar pergolas, adjustable shading devices, awnings and improved glazing. Reverse brick construction and tiled floors or polished concrete may also be used to optimise elements of passive solar design.
- f) Hot water systems that support the efficient use of natural resources and minimise consequent pollution such as greenhouse gas emissions.
- g) Natural light flow into living spaces, and energy efficient lights and fittings.
- h) Plenty of sunshine for outdoor clothes drying and multiple units should have outdoor drying areas available.
- i) Top star rated energy efficient appliances that minimise greenhouse gas generation.
- j) Efficient heating and cooling systems that are zoned to heat/cool individual areas of the residence.

#### 4.7 Water

Water is a precious resource and there is an urgent need to reduce domestic water consumption. The City's Water Planning and Management Strategy has a target of reducing individual consumption to 100kl/person/year, and where a non-drinking water source is also available a further reduction to 60kl/person/year. Over half the water used in residential developments is used in garden watering. Appropriate landscaping correctly sited can achieve much in environmental control. The residential development should have:

- a) Water conservation fitting and practices adopted in the design of the residential development and its landscaping.
- b) Landscaping that optimises elements of passive solar design and climate control.

- c) Five or six star WELS rated showerheads, dual flush toilets and tap aerators to save water.
- d) Water saving gardens using drought tolerant plants, reducing areas of lawn, use of soil improvers and use of organic mulches.
- e) Porous paving to allow infiltration of stormwater to the ground.
- f) An appropriately-sized rainwater tank plumbed into the toilets and washing machine.
- g) Evergreen plants on the east and west side of a building to block undesirable solar radiation.
- h) Deciduous plants on the north side of a building to block undesirable solar radiation in summer whilst ensuring its provision in winter.
- i) Thick shrubs on the eastern and western sides of a building to block hot easterly winds and low morning and afternoon sun in summer.
- j) Retain and protect existing, beneficially located, significant trees where possible.
- k) Building materials that have low embodied energy and be sourced locally where possible.
- l) Building materials that do not have a detrimental effect on the environment in manufacture or disposal.

#### 4.8 Application Requirements

- 4.8.1 Any application that is proposing to utilise this policy in order to seek concessions on various design elements will need to provide full details at the application stage.

For example if a concession is sought on the basis that water wise landscaping will be used, then a full landscaping plan will need to be submitted stipulating the species to be planted and irrigation proposed.

- 4.8.2 Where this policy is used to justify a design concession for a residential development the local government may impose conditions to ensure that the sustainable design element is actually incorporated in the residential development.

For example if a concession is sought on the basis that energy and water saving devices will be utilised internally then a condition will be placed on the application ensuring that these are installed.

- 4.8.3 To assist in assessment, applications will need to demonstrate and explain the positive sustainable aspects of the development. Depending on the nature of the development proposed, additional information such as shadow analysis, 3D perspectives, landscaping plans and other detailed explanation of the design may be required and will assist in fully understanding and appreciating the intent and impact of the proposed development.

## 5.0 DEFINITIONS

**Wind energy system** means equipment that converts and then stores or transfers energy from the wind into usable forms of energy. This equipment includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries or other component used in the system.

**Small wind energy system** means a wind energy system that is used to generate electricity and has a nameplate capacity of 2 kilowatts or less.

**Solar energy system** means a system which converts energy from the sun into useable electrical energy, heats water or produces hot air or a similar function through the use of solar collectors.

**Total height** means the vertical distance from natural ground level to the tip of a wind generator blade when the tip is at its highest point.