

## **LOCAL PLANNING POLICY 3.27: ENVIRONMENTALLY SUSTAINABLE DESIGN**

### **Policy Statement**

This Policy establishes environmentally sustainable design requirements and assessment criteria for residential development within the Town. This Policy seeks to reduce energy and water consumption, minimise greenhouse gas emissions, improve climate resilience, and support the delivery of more sustainable residential development at the design stage.

### **Policy Objectives**

- To facilitate and where applicable, require the incorporation of environmentally sustainable design principles in residential development within the Town.
- To provide a clear and consistent framework for the assessment of practical sustainability measures in residential development.
- To support development that reduces energy and water consumption, lowers greenhouse gas emissions and contributes to a more sustainable and climate-resilient built environment.

### **Application**

This Policy applies to applications for development approval that require assessment against the Residential Design Codes Volume 1 and involving the following:

- new single houses;
- new grouped dwellings;
- new ancillary dwellings; and
- significant additions and/or alterations to existing single houses or grouped dwellings,

This Policy does not apply to applications assessed against the Residential Design Codes Volume 2 - Apartments, mixed use development, non-residential development, or change of use applications.

For the purpose of this Policy, significant additions and/or alterations are defined in the Definitions section of this Policy.

### **Definitions**

Approved grey-water reuse system means a grey-water reuse system approved by the relevant authority, where required, and installed in accordance with the *Code of Practice for the Reuse of Greywater in Western Australia 2010*, as amended.

Rain garden means a garden comprising native shrubs, perennials and flowers planted in a small depression to filter and treat stormwater runoff.

Significant additions and/or alterations means additions and/or alterations where the proposed additional floor area is greater than 50% of the total area of the area of the existing dwelling, enclosed by the exterior walls, including all enclosed attached and detached structures (excluding outbuildings).

Solar absorptance means the fraction of the total incident solar radiation that is absorbed by the roofing material, with the remainder being reflected.

## Policy Requirements

### 1. New single houses and grouped dwellings

New single houses and grouped dwellings are to satisfy the following requirements:

- 1.1. Achieve a minimum of 100 sustainability points, as demonstrated through the Sustainable Design Checklist contained in **Appendix 1**.
- 1.2. Provide a photovoltaic solar panel system with a minimum inverter capacity of 3kW for each dwelling. In a grouped dwelling development, each dwelling is to be provided with access to a dedicated or separately metered photovoltaic solar panel system with a minimum capacity of 3kW. Where a shared roof structure serves more than one dwelling, the system must be designed so that each dwelling is allocated not less than 3kW of photovoltaic capacity.
- 1.3. Provide one of the following water management systems:
  - (a) A rainwater tank with a minimum capacity of 3,000 litres, plumbed to either a toilet or laundry within the dwelling; or
  - (b) An approved grey-water reuse system that collects grey-water from the laundry and/or bathroom(s) and redirects it for garden irrigation or groundwater recharge. *Note: The water management system must be shown on the development plans and may be subject to separate building, or health approvals.*
- 1.4. Roof structures must not exceed a solar absorptance value of 0.45, unless otherwise required by a specific local planning policy, local development plan, structure plan, other applicable planning instrument, or where required to be consistent with the heritage requirements for a heritage-listed place. *Note: The applicant must provide evidence to demonstrate the proposed roof colour or material's solar absorptance value including manufacturer specifications, colour schedules or other documentation satisfactory to the Town.*

**Note:** Lots within the Endowment Lands and Limekilns Estate may require separate approval under Local Law 43 where metal roof sheeting is proposed with a pitch greater than 5 degrees and a solar reflectivity index exceeding 40%.

## 2. Significant additions and/or alterations and ancillary dwellings

Significant additions and/or alterations to an existing dwelling, and new ancillary dwellings, are to satisfy each of the following requirements:

- 2.1. Achieve a minimum of 75 sustainability points, as demonstrated through the Sustainable Design Checklist contained in **Appendix 1**.
- 2.2. In assessing compliance with clause 2.1, where an applicant can demonstrate that one or more sustainability measure(s) listed in **Appendix 1** have already been incorporated into the existing dwelling, the Town may recognise the points value of such measures toward the required points threshold.

In this instance, the applicant must provide evidence demonstrating that the existing measure meets the relevant standard and will be maintained for the life of the development. Evidence may include plans, photographs, manufacturer or product specifications, installation certificates, technical report, or other documentation satisfactory to the Town.

- 2.3. Roof structures must not exceed a solar absorptance value of 0.45, unless otherwise required by a specific local planning policy, local development plan, structure plan, other applicable planning instrument, or where required to be consistent with the heritage requirements for a heritage-listed place.

**Note:** Lots within the Endowment Lands and Limekilns Estate may require separate approval under Local Law 43 where metal roof sheeting is proposed with a pitch greater than 5 degrees and a solar reflectivity index exceeding 40%.

- 2.4. Notwithstanding clause 2.3, where significant additions and/or alterations or a new ancillary dwelling are proposed on a lot containing an existing dwelling, the Town may approve a roof colour or material that matches the existing dwelling where the Town is satisfied this is necessary to achieve visual compatibility with the existing dwelling.

## 3. Alternative Sustainability Measures

- 3.1. An applicant may propose alternative sustainability measure(s) as a means of achieving compliance with the objectives of the Policy, with any such request including the following:
  - (a) a description of the proposed measure;
  - (b) the measurable sustainability benefit;
  - (c) an explanation of the points value sought; and
  - (d) relevant plans, specifications, technical information or other evidence required by the Town.
- 3.2. If the applicant demonstrates that the alternative measure achieves an acceptable sustainability outcome, the Town will assign a points value by reference to the purpose, intent and quantifiable performance standard of the measure, and not by reference to the overall sustainability performance of the development.

- 3.2. Where the Town determines that the proposed alternative measure does not achieve an acceptable sustainability outcome, no points will be assigned.

#### 4. Variations to this Policy

- 4.1. The Town may favourably consider a variation to a requirement under clause 1 or clause 2 due to a site-specific constraint, including:
- lot orientation
  - overshadowing
  - existing mature vegetation
  - heritage requirements
  - structural capacity
  - roof form
  - available roof area
  - physical site characteristics and/or
  - utility/network limitations.
- 4.2. The Town will generally not support a variation where non-compliance arises primarily from design preferences, convenience or budget constraints alone.
- 4.3. Where an applicant seeks a variation to a requirement under clause 1 or clause 2, the applicant must provide information to demonstrate:
- the specific requirement that cannot be met;
  - the nature of the site-specific constraint preventing compliance;
  - why the constraint cannot reasonably be overcome through design modification; and
  - how any proposed alternative measure achieves an equivalent or improved sustainability outcome.

The information may include plans, technical reports or advice, photographs, product specifications sheets or other information required by the Town.

| Document Control |                                                                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Adoption Date    |                                                                                                                                                             |
| Review Date(s)   |                                                                                                                                                             |
| Legislation      | <i>Planning and Development Act 2005</i><br><i>Planning and Development (Local Planning Schemes) Regulations 2015</i><br><i>Local Planning Scheme No. 1</i> |

## APPENDIX 1: Sustainable Design Checklist

Applicants are to complete this checklist and submit it with the application for development approval. Sustainability measures relied upon to achieve the required points should be clearly shown on the relevant plans and/or supported by the evidence listed below.

*Note: For grouped dwelling developments, a separate Sustainable Design Checklist must be submitted for each dwelling, unless otherwise accepted by the Town.*

**Applicant Name:**

**Proposed development:**

**Address of development:**

| Item                                        | Sustainability Measure                                                                                                                                                                                                                                                                                          | Points   | Evidence Required                                                                    |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------|
| <b>Orientation and passive solar design</b> |                                                                                                                                                                                                                                                                                                                 |          |                                                                                      |
| 1                                           | Orientation of the dwelling is designed primarily to the north with its longest axis east-west, excluding garages and outbuildings.                                                                                                                                                                             | 15       | Site plan with north point                                                           |
| 2                                           | The primary living space and adjoining outdoor living area are oriented between north-west and east.                                                                                                                                                                                                            | 15       | Floor plan and site plan with north point                                            |
| 3                                           | At least 60% of habitable rooms are designed to achieve cross-flow ventilation through openings on at least two different walls with a straight-line distance between the centres of the openings of at least 2.1 m.<br><br><i><b>Note:</b> An open plan living/dining/kitchen area is treated as one room.</i> | 20       | Floor plan annotated to identify cross-flow ventilation openable windows or openings |
| <b>Solar efficiency</b>                     |                                                                                                                                                                                                                                                                                                                 |          |                                                                                      |
| 4                                           | Solar battery storage for each dwelling with a capacity of:<br>(a) 4kWh - <6kWh; or<br>(b) 6kWh or greater.                                                                                                                                                                                                     | 20<br>30 | Specification sheet confirming capacity                                              |
| 5                                           | Provide a photovoltaic solar panel system with a minimum capacity of 3kW for the existing dwelling, where one is not already installed.<br><br><i><b>Note:</b> This sustainability measure is an option for <u>significant additions and alterations</u> and ancillary dwellings only.</i>                      | 15       | Specification sheet confirming capacity                                              |
| 6a                                          | 100% of windows to habitable rooms double glazed.<br><br><i><b>Note:</b> This sustainability measure is an option for new dwellings only.</i>                                                                                                                                                                   | 25       | Window schedule confirming glazing specification                                     |
| 6b                                          | 100% of the windows to habitable rooms triple glazed.<br><br><i><b>Note:</b> this sustainability measure is an option for new dwellings only.</i>                                                                                                                                                               | 50       | Window schedule confirming glazing specification                                     |
| 7                                           | A minimum 300 litre solar hot water system or heat pump hot water system.                                                                                                                                                                                                                                       | 25       | Specification sheet confirming system type and capacity                              |

| EV Charging |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                                                                                                                                                   |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 8           | <p>At least one car parking bay per dwelling provided with a minimum 7kW electric vehicle charger.</p> <p><b>Note:</b> <i>The installation of electric vehicle charging equipment should be undertaken by a qualified electrician in accordance with AS/NZS 3000 Electrical Installations, including any guidance for Installation and Location of electrical vehicle socket-outlets and charging stations. It is recommended that a smoke alarm or a heat alarm is installed in garages where an electric vehicle is regularly parked or charged.</i></p> | 25 | Electrical plan showing charging point location and specification                                                                                 |
| Landscaping |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                                                                                                                                                   |
| 9           | <p>A <u>rain garden</u> is provided with an area no less than 2% of the roof cover of the dwelling.<br/>i.e. a dwelling with 100m<sup>2</sup> of roof cover will require a rain garden of at least 2m<sup>2</sup>.</p> <p><b>Note:</b> <i>Roof cover means the total horizontal area covered by the roof of a dwelling and any attached roofed structures, measured from a site plan or roof plan and excluding minor projections such as eaves and gutters.</i></p>                                                                                       | 25 | Landscape plan, site plan or roof plan showing rain garden location, dimensions and roof cover.                                                   |
| 10          | <p>Waterwise plants comprise at least 75% of a nominated landscaped area not less than 20m<sup>2</sup> of the development site.</p> <p><b>Note:</b> <i>Waterwise plants as classified in the Water Corporation's <a href="#">Waterwise Plant Search</a>.</i></p>                                                                                                                                                                                                                                                                                           | 25 | Landscape plan with species schedule identifying waterwise plants                                                                                 |
| 11          | <p>One new medium tree is provided per dwelling, in addition to the minimum tree requirements under the Residential Design Codes Volume 1, to a maximum of two trees.</p> <p><b>Note:</b> <i>The tree must satisfy the specifications for a medium tree as defined in the Residential Design Codes Volume 1 and be planted, maintained and retained for the life of the development.</i></p>                                                                                                                                                               | 25 | Landscape plan identifying tree species, location, mature height and canopy diameter, minimum deep soil area and minimum deep soil area dimension |

| Energy efficient design            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                                                                                                                                                                                             |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12                                 | <p>The dwelling is designed as an all-electric dwelling, with no gas used for fixed cooking, space heating or water heating appliances.</p> <p><b>Note:</b> This does not include portable outdoor appliances, such as barbeques, that are not fixed building services.</p>                                                                                                                                                                                                                                                                                                                                                                                                            | 25  | Development plans showing no gas fixtures, and/or an appliance schedule confirming all electric cooking, space heating and water heating appliances, with no fixed gas appliances proposed. |
| 13                                 | <p>Demonstrate an individual NatHERS (Nationwide House Energy Rating Scheme) star rating (or other comparable star rating measurement tool which is accredited by the National Construction Code which is one star in excess of the minimum energy efficiency requirement specified under the National Construction / Building Code of Australia for a Class 1a dwelling.</p> <p>The NatHERS (or other accredited equivalent) star rating for the dwelling shall be certified by a NatHERS (or other accredited equivalent) energy assessor using the NatHERS (or other accredited equivalent) software and shall be provided as part of the application for development approval.</p> | 75  | NatHERS Certificate (or equivalent accredited energy rating certificate)                                                                                                                    |
| Water saving fixtures              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                                                                                                                                                                                             |
| 14                                 | All water fixtures including taps, toilets and showers, are within one star of the maximum Water Efficiency Labelling Standard (WELS) rating available for the relevant fixture type, excluding kitchen sink taps and laundry trough taps.                                                                                                                                                                                                                                                                                                                                                                                                                                             | 25  | WELS product specification sheets identifying the WELS rating of all nominated fittings.                                                                                                    |
| Alternative sustainability measure |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                                                                                                                                                                                             |
| 15                                 | Alternative sustainability measure approved by the Town in accordance with Clause 3 of this Policy. Points allocation to be determined by the Town having regard to the equivalent sustainability benefit achieved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | TBD |                                                                                                                                                                                             |
|                                    | <b>TOTAL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |                                                                                                                                                                                             |