

# LOCAL PLANNING POLICY: SUSTAINABLE DESIGN

|                                                           |                                                                                                                                                                                                 |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Legislation / local law requirements                      | This Policy has been prepared under the provisions of Schedule 2, Part 2 of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>                                       |
| Relevant delegations                                      | 16.1.1 Determination of various applications for development approval under the City's Local Planning Scheme                                                                                    |
| Related policies, procedures and supporting documentation | <ul style="list-style-type: none"><li>• <i>Planning and Development Act 2005</i></li><li>• Local Planning Policy: Built Form</li><li>• Residential Design Codes Volume 1 and Volume 2</li></ul> |

## PART 1 – PRELIMINARY

### INTRODUCTION

The City of Vincent is an inner-city locality undergoing significant urban reform, driven by the pressures and opportunities of increased densification. The City supports well-managed urban growth, while also recognising the need for sustainable development that responds to the climate, site conditions and scale, and minimises broader environmental impacts.

The design of the built environment plays a pivotal role in shaping the City's long-term sustainability and resilience.

The integration of sustainable design principles into development offers a pragmatic and forward-looking response to climate change, resource scarcity, and the rising cost of living. Well-designed buildings can reduce energy and water consumption, lower greenhouse gas emissions, and enhance the comfort, health, and wellbeing of occupants.

### PURPOSE

The purpose of this Policy is to incorporate sustainable design principles into development throughout the City. This ensures that new development responds to current and emerging challenges to achieve a sustainable urban environment.

This Policy provides clear guidance on available incentives for development to achieve a higher environmental performance and improved sustainability outcome.

### OBJECTIVES

The objectives of the Policy are to:

1. To provide a framework and incentives for development that supports the integration of sustainability principles into the built form.
2. Improve resource, energy and water efficiency throughout the development lifecycle including during construction, maintenance and ongoing use.
3. Incorporate sustainable and energy efficient design that befits the local climate and provides comfortable conditions while reducing greenhouse gas emissions.

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## SCOPE

This Policy applies to:

- All development applications for Single Houses, Grouped Dwellings and **major development** to which the Residential Design Codes Volume 1 applies.
- All development applications for development to which the Residential Design Codes Volume 2 applies.
- All development applications for new commercial buildings or major development.

## PART 2 – POLICY STANDARDS

### SUSTAINABLE DESIGN MEASURES

- 1.1 Development applications are to demonstrate the following sustainable principles:
  - (a) Optimises thermal performance of the building throughout the year through solar passive design and use of materials.
  - (b) Considers the whole of life environmental impact of the building, including embodied energy, and incorporates measures to reduce this impact.
  - (c) Integrates efficient urban water cycle management by minimising potable water use, maximising opportunities for rainwater harvesting and stormwater reuse, and reducing the generation and discharge of wastewater and stormwater through sustainable site design and water-efficient technologies.
  - (d) Enhances the look, feel and function of neighbourhoods through landscape and garden design that incorporates water-sensitive features and locally adapted plants and trees that support urban cooling and native biodiversity.
- 1.2 Development applications (residential and commercial) would meet clause 1.1 where the Sustainable Principles Pathway (**Appendix 2**) has been met for each category.
- 1.3 The incorporation of sustainable design principles would be considered when assessing a development application against the relevant Design Principles of the Residential Design Codes Volume 1 and relevant objectives, in accordance with **Appendix 3**.
- 1.4 The submission of a Life Cycle Assessment that meets the baselines tabled below would be considered by the City when assessing clause 4.15 of the Residential Design Codes Volume 2.

| Building type                  | Performance Requirement                                                                                        |                                                                                                       |
|--------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|                                | Global Warming Potential                                                                                       | Net Fresh Water Use                                                                                   |
| Residential<br>(BCA Class 1-3) | < 2,250 kgCO <sub>2</sub> e / Occupant / Year<br><br>(50% saving against Perth statistical average residences) | < 57m <sup>3</sup> / Occupant / Year<br><br>(50% saving against Perth statistical average residences) |

### DEVELOPMENT INCENTIVES

#### 2. GreenTrack

2.1 The following development applications qualify as a GreenTrack application:

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2.1.1 Where a **Life Cycle Assessment** has been provided, excluding:

- **Complex applications**; and
- Applications that require assessment under Residential Design Codes Volume 2.

2.1.2 Where **significant existing tree(s)** have been retained as part of works greater than \$50,000, excluding:

- **Complex applications**

2.2 For development applications that meet the GreenTrack criteria, the City will:

- Undertake an initial assessment within 10 working days of lodgement;
- Assess amended plans and/or additional information submitted following a Request for Further Information within 5 working days of submission; and
- Apply a fee reduction in accordance with the *Development Fee Reductions and Refunds Policy*.

| OFFICE USE ONLY          |                                             |
|--------------------------|---------------------------------------------|
| Responsible Officer      | Manager Strategic Planning & Sustainability |
| Initial Council Adoption | 22 March 2011                               |
| Previous Title           | Policy No. 7.5.10 Sustainable Design        |
| Reviewed / Amended       | 11 March 2011                               |
| Next Review Date         | MM/YYYY                                     |

## APPENDIX 1: DEFINITIONS

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**Complex applications** means a development application which proposes or is of the type:

- Telecommunications infrastructure.
- Development on City owned and managed land.
- Mandatory or Optional Development Assessment Panel Form 1 applications as defined by the *Planning and Development (Development Assessment Panel) Regulations 2015*.

**Major Development** means a development application which proposes:

- Additions and/or alterations resulting in an additional building footprint of more than 50 percent of the existing building footprint

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## APPENDIX 2: PERFORMANCE PATHWAY

The table below presents **five** sustainable performance categories that are to be achieved. In some cases, the submission of a certification of category one will achieve multiple other categories, and this has been accounted for in the achievement criteria.

Plans provided as part of a development application (DA) are to show the incorporation of the selected technologies/design/landscaping.

| Sustainable Dwelling Performance Pathways                                                                                                  | Achievement Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Category 1 - Energy Efficient Dwelling: Choose one performance option in Category 1</b>                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>a) Life Cycle Assessment (LCA)</b>                                                                                                      | <p>Submission of compliant Life Cycle Assessment* with lodgement of DA.<br/> <b>A compliant LCA will demonstrate the following:</b></p> <ul style="list-style-type: none"> <li>• 50% reduction of Global Warming Potential</li> <li>• 50% reduction on water usage</li> </ul> <p>When compared with the Vincent statistical average</p> <p><i>*refer to definitions for assessment requirements and module inputs</i></p> <p style="text-align: center;"><b>AND</b></p> <p>Achievement of <b>Category 4</b>.</p> |
| <b>OR</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>b) NatHERS 7 stars minimum</b>                                                                                                          | <p>Submission of compliant NatHERS rating with lodgement of DA demonstrating a 7 Star rating against <b>Based on the full national standard within NCC 2022 – not the abbreviated WA adoption.</b></p> <p style="text-align: center;"><b>AND</b></p> <p>Achievement of <b>Category 2-5</b>.</p>                                                                                                                                                                                                                  |
| <b>OR</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>c) Green Star Homes Accreditation</b>                                                                                                   | <p>Submission of a Green Star Designed award upon lodgement of the DA.</p> <p>No additional Categories to be achieved.</p>                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>OR</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>d) Self Assessment Pathway Optimised Solar Passive Design</b>                                                                           | <p>Submission of a completed design response that meets the Solar Design Self Assessment Pathway at time of DA lodgement.</p> <p>The design response should demonstrate the proposed design response having regard to the thermal performance principles.</p> <p style="text-align: center;"><b>AND</b></p> <p>Achievement of <b>Category 2-5</b>.</p>                                                                                                                                                           |
| <b>OR</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Submission of a suitable equivalent Sustainable Design Assessment with prior agreement by the City</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Category 2 – Circularity in Materials and Design (minimum of two)</b>                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 25% of materials with low embodied and manufacturing emissions                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Project saves materials by retaining existing dwelling to renovate (with up to 50% demolition) in favour of full demolition and new build. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 10% of building materials by volume to be from reused, recycled or salvaged material.                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| A minimum of 10% of new building materials by volume to be locally or Australian sourced or manufactured.                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Use of durable and low maintenance materials                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Design for adaptable or multi-generational living.                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Modular design.                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Efficient use of internal space through clever use of floor area to minimise wasted space and building materials.                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Minimize overall use of building materials.                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>AND</b>                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Category 3 - Sustainably Sourced Energy (minimum of three)</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| All electric – No gas connection                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Solar PV 6+ kw                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Battery storage 10+ kw/h                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Solar hot water system                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Electric heat pump                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Induction cooktop and electric oven                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| EV charger 7 kw                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>AND</b>                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Category 4 – Water Sensitive Dwelling (minimum of three)</b>                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Rainwater harvesting tank</b> that are a minimum of 5000L: Use for toilet flushing and garden irrigation                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Greywater system:</b> Use for toilet flushing and garden irrigation                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Efficient Fixtures:</b> Use 4-5 star WELS rated taps, showers, toilets, and appliances                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Optimised water infiltration across site:</b> reduced impervious surfacing where possible.                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Raingarden or swale</b> with direct connection to gutter/downpipe                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Grading of outdoor surfacing</b> to direct runoff into garden beds within lot boundary                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>Waterwise landscaping</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Category 5 - Landscape and Natural Design (minimum of two)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Tree retention:</b> Retention of one <b>significant existing tree</b> . Where two or more <b>significant existing tree</b> is retained, it fulfils the requirements of this category.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Natural design elements:</b> Demonstrate incorporation of the following into the design of the dwelling: <ul style="list-style-type: none"> <li>• Optimised access to natural light and ventilation.</li> <li>• Use of natural and earthy colours, materials, shapes and textures in the design of the dwelling and landscaping.</li> <li>• Visual connections to nature – substantial views between internal dwelling and vegetation.</li> <li>• Design features which enhance indoor/outdoor connectivity.</li> <li>• Use of sensory stimuli such as a water feature or scented planting.</li> </ul> |
| <b>Permeable surfacing:</b> A minimum of 30% of site provided as soft landscaping, including on-structure planting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Drought tolerant garden:</b> Garden design incorporating a minimum of 70% drought tolerant natives with a focus on local species endemic to the soil type.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Planting that supports biodiversity:</b> Including plants that are bird attracting WA local species and have a diversity of heights at maturity, and features that provide habitat for fauna.                                                                                                                                                                                                                                                                                                                                                                                                          |

## SOLAR DESIGN SELF ASSESSMENT PATHWAY

| Passive Design Theme    | Approaches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Orientation</b>      | <ul style="list-style-type: none"> <li>• Orient main living spaces such as kitchen, living, dining to the north of the building, paired with north facing windows and openings, to maximize access to winter sun.</li> <li>• Where site constraints preclude an effective northern orientation, such as pre-existing boundary walls or overshadowing, the design should integrate alternative strategies such as clerestorey windows, voids, light wells or an internal courtyard.</li> <li>• Bedrooms and service rooms such as laundry to the south and west side of dwelling.</li> <li>• Rooms generally grouped by their heating/cooling needs.</li> <li>• Wet area grouped close to each other to reduce pipework and distance of hot water flow.</li> <li>• Consider use of doors to zone spaces for more efficient heating/cooling.</li> </ul> |
| <b>Windows</b>          | <ul style="list-style-type: none"> <li>• North facing windows: large to living spaces – up to 25% of internal floor area in size.</li> <li>• South facing windows: small to moderate, for daylighting without heat gain.</li> <li>• East and west windows: minimised or well considered vertical shading. If needed for light/view, use narrow vertical windows with deep reveals or vertical screens/fins.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Ventilation</b>      | <ul style="list-style-type: none"> <li>• All windows are operable to capture cross ventilation – particularly to upper floors to allow for night purging.</li> <li>• Windows positioned in straight paths for cross-ventilation – ideally aligned with prevailing South West winds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>External colours</b> | <ul style="list-style-type: none"> <li>• Use of light coloured roofing with an absorptance rating of no greater than 0.5 for heat reflection.</li> <li>• Use of light-coloured roofing and external walls to reduce summer heat gain.</li> <li>• Use of darker, heat-absorbing surfaces (e.g. concrete walls or floors) inside to store winter heat.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Thermal Mass</b>     | <ul style="list-style-type: none"> <li>• Use of thermal mass (e.g. concrete slab, brick or block internal walls) in north-facing living areas.</li> <li>• Appropriate use of thermal mass – large areas of thermal mass such as bricks, concrete and dark coloured surfacing should be shaded from sun in summer and be exposed to direct north sunlight in winter.</li> <li>• Avoidance of expanses of internal thermal mass which do not benefit from winter sun access.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Insulation</b>       | <ul style="list-style-type: none"> <li>• Well installed insulation placed in ceilings, walls, and between floors to reduce heat transfer and maintain indoor comfort across seasons.</li> <li>• Minimum R2.5 to external walls.</li> <li>• Minimum R4 or R6 to ceiling.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Internal fans</b>    | <ul style="list-style-type: none"> <li>• Ceiling fans placed in all living spaces and bedrooms.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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## APPENDIX 3: BUILT FORM DEPARTURES

The City would consider the following departures from the 'deemed-to-comply' standards of the local planning framework where they support an improved sustainable outcome through the Sustainable Design Measures of this Policy.

All development applications must still meet the relevant design principles and local housing objectives.

Applicants are to demonstrate why the departure for the deemed-to-comply provisions have resulted from incorporating sustainable principles.

| Elements                                                                                                                                       | Conditions                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Trees and landscaping</b>                                                                                                                   |                                                                                                                                                                                                                                                                                                                     |
| The minimum number of trees may be reduced where a larger tree is proposed of which exceeds the canopy cover that would otherwise be provided. | <ul style="list-style-type: none"> <li>The minimum deep soil area for the tree size is met; or</li> <li>An Arborist/Landscape Report specifies the provided deep soil area is adequate for the survival of the species.</li> </ul>                                                                                  |
| <b>Building height</b>                                                                                                                         |                                                                                                                                                                                                                                                                                                                     |
| The maximum building height may be increased by 0.6 metres.                                                                                    | <ul style="list-style-type: none"> <li>The building height does not exceed the relevant overshadowing standard of the local planning framework.</li> </ul>                                                                                                                                                          |
| <b>Street setbacks</b>                                                                                                                         |                                                                                                                                                                                                                                                                                                                     |
| The setback to the primary street may be reduced by 1.5 metres.                                                                                | <ul style="list-style-type: none"> <li>The reduced primary street setback does not result in: <ul style="list-style-type: none"> <li>Less landscaping area; and/or</li> <li>Less trees</li> </ul> As outlined in the local planning framework</li> </ul>                                                            |
| A garage may align with the facade of the dwelling.                                                                                            | <ul style="list-style-type: none"> <li>The garage is of a similar scale and design of the existing dwelling; and</li> <li>Does not exceed 50% of the lot width.</li> </ul>                                                                                                                                          |
| <b>Lot boundary setbacks</b>                                                                                                                   |                                                                                                                                                                                                                                                                                                                     |
| Maximum boundary wall heights may be increased by 0.3 metres.                                                                                  | <ul style="list-style-type: none"> <li>The boundary wall is not adjacent to an adjoining outdoor living area (or equivalent); and</li> <li>The shadow cast from the increased boundary wall height does not extend over a major opening or outdoor living area (or equivalent) of an adjoining property.</li> </ul> |
| Lot boundary setback reduced by 1 metre.                                                                                                       | <ul style="list-style-type: none"> <li>The reduced lot boundary setback does not apply to the building.</li> </ul>                                                                                                                                                                                                  |
| <b>Visual privacy</b>                                                                                                                          |                                                                                                                                                                                                                                                                                                                     |
| The cone of visions for bedrooms and loungerooms may be reduced by 1 metre.                                                                    | <ul style="list-style-type: none"> <li>The cone of vision does not fall over a major opening or outdoor living area (or equivalent) of an adjoining property.</li> </ul>                                                                                                                                            |