THE 10 KEY SUSTAINABLE BUILDING CATEGORIES

ENVIRONMENTALLY SUSTAINABLE DESIGN KIT

Have you **CONSIDERED** the following?

City of Darebin
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As part of the Sustainable Design Assessment in the Planning Process (SDAPP) all applicants are encouraged to consider the 10 Key Sustainable Building Categories within their design and ESD report. Developments comprising of fifteen or more new residential dwellings or more than 1000m2 of non-residential Gross Floor Area require a Sustainable management Plan (SMP). Medium developments of five to fourteen residential dwellings or 100m2 to 1.000m2 of non-residential Gross Floor Area require a Sustainable Design Assessment (SDA).

Inner Melbourne Action Plan (IMAP) have developed fact sheets on the 10 categories and an overview of the SDAPP process. The factsheets provide detailed information on design measures that can be incorporated to improve the sustainability of all sizes of development. In addition, the fact sheets contain mandatory requirements and Council's Best Practice Standard for each category as well as useful references and links for further information. Below is a summary of the 10 categories and more information can be found on the Darebin website and at the planning counter.

THE 10 KEY SUSTAINABILE BUILDING CATEGORIES

1. Indoor Environment Quality
2. Energy Efficiency
3. Water Efficiency
4. Stormwater Management
5. Building Materials
6. Transport
7. Waste Management
8. Urban Ecology
9. Innovation

1.0 Indoor Environment Quality

Objective: to achieve a healthy indoor environment quality for the wellbeing of building occupants.

Examples of design decisions:

- Maximise daylight and external views while minimising heat gain in summer
- Thermal comfort
- Maximising natural ventilation by operable windows to all rooms
- Minimising the use of toxic and hazardous materials

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2.0 Energy Efficiency

Objective: To ensure the efficient use of energy and to reduce the need for mechanical cooling and heating, thereby reducing energy costs and greenhouse gas emissions.

Examples of design decisions:

- External, correctly sized fixed horizontal shading for northern glazing
- External, adjustable shading for east and west windows
- Maximising access to north sunlight, particularly in living areas for winter heating
- Building fabric i.e. insulation, glazing, sealing enhanced above the minimum Building Code of Australia (BCA) requirements
- Select hot water and heating/cooling systems that use the least amount of energy use (e.g. solar hot water)
- Use fluorescent and LED lighting only

3.0 Water Efficiency

Objective: To ensure the efficient use of water, to reduce potable water use, to collect and recycle water and to reduce utility bills.

Examples of design decisions:

- Use water efficient fixtures and fittings
- Avoid the use of mains water for landscape irrigation; plant drought tolerant plants.
- Connect toilets to water tanks
- Re–use water (e.g. greywater)

4.0 Stormwater Management

Objective: to reduce stormwater runoff and stormwater pollution, to incorporate the use of water sensitive urban design (WSUD), including stormwater re–use.

Examples of design decisions:

- Minimise pollution to drains, rivers and creeks by cleaning stormwater before it leaves the site through Water Sensitive Urban Design (WSUD) techniques such as raingardens, swales, etc.
- Maximise stormwater capture through permeable surfaces and water tanks connected to toilets.

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5.0 Building Materials

Objective: To minimise the environmental impacts of materials specified by encouraging the use of materials that are recycled, recyclable, sustainably managed, have a low embodied energy and are not toxic.

Examples of design decisions:

- Choosing materials with a low embodied energy (energy taken to manufacture a material)
- Use of materials with a recycled content
- Future recyclability of materials
- Designing to minimise material waste
- Choose independant third party certified materials from ecospecifier, GECA, FSC and PEFC

6.0 Transport

Objective: to minimise car dependency and to ensure that the built environment is designed to promote the use of public transport, walking and cycling.

Examples of design decisions:

- Providing convenient and secure bike storage
- Providing a range of bicycle holds so all riders are accommodated.
- Providing access to showers and lockers at work
- Green Travel Plan for residents, visitors and staff

7.0 Waste Management

Objective: to ensure waste avoidance, and reuse and recycling during the construction and operation stages of development.

Examples of design decisions:

- Preparation of a construction Waste Management Plan
- Adoption of a demolition and construction material recycling target
- Preparation of an operational Waste Management Plan
- Design so waste and recycling areas are easy to access for residents
- Using council waste services where possible

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8.0 Urban Ecology

Objective: to ensure waste avoidance, and reuse and recycling during the construction and operation stages of development.

Examples of design decisions:

- Maintaining / enhancing the site's ecological value
- Creating communcal garden areas for residents and workers
- Increasing areas of biodiversity

9.0 Innovation

Objective: to encourage innovative technology, design and processes in all development, so as to positively influence the sustainability of buildings.

Examples of design decisions:

- Significant enhancements of best practice sustainable design standards
- Introduction of new technology
- Excellent passive design approach
- Installation of solar hot water and photo voltaic panels for energy

10.0 Construction and Building Management

Objective: to ensure waste avoidance, and reuse and recycling during the construction and operation stages of development.

Examples of design decisions:

- Building User's Guise that explains a building' sustainable design principles
- Preparation of an operation Environmental Managament Plan
- Contractor has valid ISO 14001 (environmental management) accreditation