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**ESD in the Planning Permit Application Process**

Sustainable design elements are most effective and have the least cost when they are considered at the earliest stages of a development. For this reason, from April 2022, The City of Maroondah’s planning application process requires developers to include Environmentally Sustainable Design (ESD) considerations within their applications in line with section 22.15 of the Maroondah Planning Scheme.

Maroondah uses the **Sustainable Design Assessment in the Planning Process** (SDAPP) program developed by the Municipal Association of Victoria (MAV); providing clear guidance on sustainability goals and consistency of process with other participating Councils across Victoria.

All applicants are requested to consider Sustainable Design within their developments. However, Council will require certain applications (based on size) to specifically address the 10 Key Sustainability Building categories and follow the process as outlined through SDAPP.

As part of the SDAPP program, all **Large** planning permit applications with the City of Maroondah are required to include a Sustainable Management Plan (SMP). Your application is a *‘Large’* planning application if it meets one of the following categories:

* Residential – 10 or more residential dwellings
* Residential alterations and additions greater than 1000m2
* Non-residential – Development of a building with a gross floor area (GFA) of more than 1000m2
* Non-residential alterations and additions greater than 1000m2

Please refer to the Sustainable Design Assessment (SDA) information for building sizes below these benchmarks. All information on the SDAPP program can be obtained on our webpage: xxxxxxxx

# Applicant Response Guidelines

# What is a Sustainable Management Plan (SMP)?

An SMP is a detailed sustainability assessment of a proposed design at the planning stage. An SMP addresses the 10 Key Sustainable Building Categories (outlined in the SDAPP) and demonstrates that a holistic ESD review has been undertaken during a project’s early design stages.

Amongst other aspects an SMP must:

* Demonstrate how each of the 10 key Sustainable Design Categories have been addressed
* Identify relevant sustainability targets and performance standards
* Document the means by which the appropriate target or performance is to be achieved

In order to adequately respond to the above requirements the SMP should include a sustainable design tool assessment, such as the Built Environment Sustainability Scorecard [(BESS)](http://www.bess.net.au/) or using an appropriate [Green Star rating tool](https://www.gbca.org.au/green-star/).

The nature of larger developments provides the opportunity for increased environmental benefits and the opportunity for major resource savings. Hence, greater rigour in investigation is justified. It may be necessary to engage a sustainability consultant to prepare an SMP.

This reference document is designed to provide guidance on how to prepare an SMP report. The document outlines objectives, ESD issues, response guidelines and references for all 10 Key Sustainable Building Categories. However, this guide is not exhaustive, and it is recommended that each Applicant engages suitable professional services to aid the SMP development.

# Section Guides

The following sections outline information that might typically be included within an SMP.

# Project Information:

Applicants should state the property address and the proposed development’s use and extent. They should describe neighbouring buildings that impact on or may be impacted by the development. Applicants should outline relevant areas, such as site permeability, water capture areas and gross floor area of different building uses. Applicants should describe the development’s sustainable design approach and summarise the project’s key ESD objectives, including any targets and benchmarks.

# Environmental Categories:

The applicant is required to address each of the 10 Key Sustainable Building Categories and demonstrate how the design meets its objectives. Applicants are requested to review Council’s Best Practice requirements, as well as any mandatory obligations under each category. To assist Applicants, the following pages indicate the type of information to address under each Key Sustainable Building Category.

# Objectives:

The intent of each Key Environmental Category is outlined through a list of main objectives. Applicants are requested to review these and ensure that their Project’s objectives are aligned.

# Design Issue:

This section should comprise a list of topics that might be relevant within the environmental category. As each application responds to different opportunities and constraints, it is not required to address all issues. The list is non-exhaustive and topics can be added to tailor to specific application needs. Applicants should ensure that where a design response is discussed, reference is made to the relevant drawing or report where the aspect has been reflected in the design.

# Assessment Method Description:

The Applicant should explain what standards have been used to assess the applicable issues. As SMPs are required for larger projects, where sustainability approaches can have the biggest gains, Applicants should seek to apply more rigorous standards.

# Benchmarks Description:

The Applicant is required to briefly explain the benchmark applied as outlined within the chosen standard. A benchmark description is required for each environmental issue that has been identified as relevant.

# How does the proposal comply with the benchmarks?

The Applicant should show how the proposed design meets the benchmarks of the chosen standard through making references to the design brief, drawings, specifications, Consultant reports or other evidence that proves compliance with the chosen benchmark.

# Ongoing management, maintenance and monitoring of initiatives:

The Applicant should identify responsibilities and a schedule for implementation, and ongoing management, maintenance and monitoring of ESD initiatives proposed.

The Applicant should demonstrate that the design elements, technologies and operational practices that comprise the ESD management plan can be maintained over-time. For example, this would include initiatives such as production of a Building User Guide and implementation of regular building tuning etc.

# ESD Matters on Architectural Drawings:

Architectural drawings should reflect all relevant ESD matters where feasible. As an example, window attributes, sun shading and materials should be noted on elevations and finishes schedules, water tanks and renewable energy devices should be shown on plans. The site’s permeability should be clearly noted, and relevant calculations included. It is also recommended to indicate water catchment areas on roof- or site plans to confirm water re-use calculations.

# Appendices:

The Applicant should ensure that all relevant reports and modelling data are appended to the SMP. This can include, but not limited to, print-outs of a BESS report, STORM / MUSIC tools, energy modelling software results and daylight modelling report etc.

SMP Report Example Development X

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# 1. Indoor Environment Quality (IEQ)

**Objectives:**

|  |
| --- |
| To achieve a healthy indoor environment quality for the wellbeing of building occupants. To provide a naturally comfortable indoor environment will lower the need for building services, such as artificial lighting, mechanical ventilation and cooling and heating devices. |

**Issues:**

Topics to be addressed may include:

* Thermal Comfort
* Natural Ventilation
* Daylight
* External Views
* Orientation of single aspect dwellings
* Glare Prevention
* Hazardous Materials and VOC
* Electric Lighting Levels
* Acoustics
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues
* Good Environmental Choice Australia Standards
* Australian Green Procurement
* NCC provisions provide minimum standards; improvements on these minimum requirements are strongly encouraged

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Good Environmental Choice Australia Standards [www.geca.org.au](http://www.geca.org.au)

Australian Green Procurement [www.greenprocurement.org](http://www.greenprocurement.org)

Residential Flat Design www.planning.nsw.gov.au

Your Home [www.yourhome.gov.au](http://www.yourhome.gov.au)

# 2. Energy Efficiency

**Objectives:**

|  |
| --- |
| To ensure the efficient use of energy.To reduce total operating greenhouse emissions.To reduce energy peak demand.To reduce associated energy costs. |

**Issues:**

Topics to be addressed may include:

* Building Fabric enhanced over minimum NCC requirements
* Operating Energy
* Energy Sub-Metering
* Peak Energy Demand Reduction
* Efficient Shading
* Glazing Treatments
* Access to Natural Daylight
* Lighting Efficiency
* Lighting Zoning
* Air leakage minimised
* Efficient HVAC system
* HVAC zoning
* Efficient onsite generation of electricity
* Allowance for efficient fans and pumps (e.g. VSD)
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues
* Window Efficiency Rating Scheme (WERS) compares summer and winter performance
* Minimum Energy Performance Standards (MEPS) Regulations in Australia
* Energy Ratings are available for various appliances, incl. air-conditioning
* NCC provisions provide minimum standards; improvements on these minimum requirements are strongly encouraged

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

House Energy Rating [www.nathers.gov.au](http://www.nathers.gov.au)

First Rate [www.sustainability.vic.gov.au](http://www.sustainability.vic.gov.au)

Window Efficiency Rating Scheme (WERS) www.wers.net

Minimum Energy Performance Standards (MEPS) [www.energyrating.gov.au](http://www.energyrating.gov.au)

Energy Efficiency [www.resourcesmart.vic.gov.au](http://www.resourcesmart.vic.gov.au)

# 3. Water Efficiency

**Objectives:**

|  |
| --- |
| To ensure the efficient use of water.To reduce total operating potable water use.To encourage the collection and reuse of stormwater.To encourage the appropriate use of alternative water sources (e.g. grey water).To minimize associated water costs. |

**Issues:**

Topics to be addressed may include:

* Minimising Amenity Water Demand
* Water Meter
* Landscape irrigation
* Efficient Fixtures
* Heat Rejection Water
* Fire Systems Check Water Consumption
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues
* Water Efficient Labelling Scheme (WELS) provides information on appliances and fittings; highest available ratings are recommended
* Water Services Association of Australia, The national Water Conservation Rating and Labelling Scheme
* NCC provisions provide minimum standards; improvements on these minimum requirements are strongly encouraged

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Water Efficient Labelling Scheme (WELS) www.waterrating.gov.au

Water Services Association of Australia [www.wsaa.asn.au](http://www.wsaa.asn.au)

Melbourne Water STORM calculator www.storm.melbournewater.com.au

Sustainable Landscaping [www.ourwater.vic.gov.au](http://www.ourwater.vic.gov.au)

# 4. Stormwater Management

**Objectives:**

|  |
| --- |
| To reduce the impact of stormwater run-off.To improve the water quality of stormwater run-off.To achieve best practice stormwater quality outcomes.To incorporate water sensitive urban design principles. |

**Issues:**

Topics to be addressed may include:

* STORM rating
* MUSIC modelling
* Site Permeability
* Discharge to Sewer
* Watercourse Pollution
* Stormwater Detention
* Stormwater Treatment
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* STORM rating, minimum 100% is required
* Meeting Victoria’s best practice storm water targets is strongly recommended
* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant Issues
* Water Sensitive Urban Design
* Environmental Protection Authority Victoria
* Water Services Association of Australia, The national Water Conservation Rating and Labelling Scheme
* NCC provisions and the Building regulations provide minimum standards; improvements on these minimum requirements are strongly encouraged

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Melbourne Water STORM calculator www.storm.melbournewater.com.au

Water Sensitive Urban Design Principles www.melbournewater.com.au

Environmental Protection Authority Victoria [www.epa.vic.gov.au](http://www.epa.vic.gov.au)

Water Services Association of Australia www.wsaa.asn.au

Sustainable Landscaping [www.ourwater.vic.gov.au](http://www.ourwater.vic.gov.au)

# 5. Building Materials

**Objectives:**

|  |
| --- |
| To minimise the environmental impacts materials used by encouraging the use of materials with a favourable lifecycle assessment based on the following factors: * Fate of material
* Recycling/Reuse
* Embodied energy
* Biodiversity
* Human health
* Environmental toxicity
* Environmental responsibility.
 |

**Issues:**

Topics to be addressed may include:

* Reuse of Materials and other Recycled Materials
* Embodied Energy of Materials (e.g. concrete, steel, aluminium etc)
* Toxicity
* Sustainable Timber
* Design for Disassembly
* Transport
* Suitability
* Maintenance / Durability
* Other

**Applicant Responses:**

The applicant is encouraged to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* Green Star, BREEAM and LEED provide benchmarks for relevant Issues
* Forest Stewardship Council Certification Scheme
* NCC provisions provide minimum standards; improvements on these minimum requirements are strongly encouraged

**References and useful information:**

Building Materials, Technical Manuals www.yourhome.gov.au

Embodied Energy Technical Manual www.yourhome.gov.au

Good Environmental Choice Australia Standards [www.geca.org.au](http://www.geca.org.au)

Forest Stewardship Council Certification Scheme www.fsc.org

Australian Green Procurement [www.greenprocurement.org](http://www.greenprocurement.org)

# 6. Transport

**Objectives:**

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

**Issues:**

Topics to be addressed may include:

* Minimising the provision of car parks for conventional vehicles
* Providing bike storage
* Providing Access to Showers
* Car sharing
* Green Travel Plan
* Improving Pedestrian Spaces
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues
* Council Legislation

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Off-setting Car Emissions Options [www.greenfleet.com.au](http://www.greenfleet.com.au)

Sustainable Transport [www.transport.vic.gov.au/doi/internet/icy.nsf](http://www.transport.vic.gov.au/doi/internet/icy.nsf)

Maroondah Sustainable Transport Policy xxxxxxxxxxxxx

Bicycle Victoria www.bv.com.au

7. Waste Management

**Objectives:**

|  |
| --- |
| To ensure waste avoidance, reuse and recycling during the design, construction and operation stages of development.To ensure long term reusability of building materials.To meet Councils’ requirement that all multi-unit developments must provide a Waste Management Plan in accordance with the *Guide to Best Practice for Waste Management in Multi-unit Developments 2010*, published by Sustainability Victoria.  |

**Issues:**

Topics to be addressed may include:

* Construction Waste Management Plan
* Operation Waste Management Plan
* Access and storage for recycling and green waste
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues
* Section 3 / 4 of the NSW Environmental Management Systems Guidelines 1998 or 2007
* ISO14001 Environmental Management System (EMS)

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Construction and Waste Management www.sustainability.vic.gov.au

Preparing a WMP [www.epa.vic.gov.au](http://www.epa.vic.gov.au)

Waste and Recycling [www.resourcesmart.vic.gov.au](http://www.resourcesmart.vic.gov.au)

Better Practice Guide for Waste Management in Multi-Unit Dwellings (2002) and

Waste reduction in office buildings (2002) www.environment.nsw.gov.au

# 8. Urban Ecology

**Objectives:**

|  |
| --- |
| To protect and enhance biodiversity.To provide sustainable landscaping.To protect and manage all remnant indigenous plant communities.To encourage the planting of indigenous vegetation.  |

**Issues:**

Topics to be addressed may include:

* On site topsoil retention
* Reuse of already developed land
* Maintaining / Enhancing Ecological Value
* Reclaiming contaminated land
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues
* Council Legislation

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Department of Sustainability and Environment www.dse.vic.gov.au

Australian Research Centre for Urban Ecology [www.arcue.botany.unimelb.edu.au](http://www.arcue.botany.unimelb.edu.au)

Greening Australia [www.greeningaustralia.org.au](http://www.greeningaustralia.org.au)

Green Roof Technical Manual [www.yourhome.gov.au](http://www.yourhome.gov.au)

Growing Green Guide http://www.growinggreenguide.org/

# 9. Innovation

**Objective:**

|  |
| --- |
| To encourage innovative technology, design and processes in all development, which positively influence the sustainability of buildings. |

**Issues:**

Topics to be addressed may include:

* Significant enhancements to the environmental performance
* Defining synergies between building elements and building uses
* Innovative social improvements
* New technology
* Good passive design approach
* Responding to local climate conditions
* New design approach
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant Issues
* Exceeding typical performance benchmarks or enhancing typical building processes
* NCC provisions provide minimum standards; improvements on these minimum requirements are strongly encouraged

**References and useful information:**

Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)

Green Building Council Australia www.gbca.org.au

Victorian Eco Innovation lab [www.ecoinnovationlab.com](http://www.ecoinnovationlab.com)

Business Victoria [www.business.vic.gov.au](http://www.business.vic.gov.au)

Environment Design Guide www.environmentdesignguide.com.au

# 10. Construction and Building Management

**Objective:**

|  |
| --- |
| To encourage a holistic and integrated design and construction process and ongoing high performance. |

**Issues:**

Topics to be addressed may include:

* Construction Environmental Management Plan
* Contractor has valid ISO14001 accreditation
* Operation Environmental Management Plan
* Building Tuning
* Building User’s Guide
* Stormwater pollution reduction Strategy (construction and operation)
* Other

**Applicant Responses:**

The applicant is required to address the above applicable criteria and demonstrate how the design meets the intent. The response should include the following:

* Assessment Method Description
* Benchmarks Description
* How does the proposal comply with the benchmarks?

**Relevant Standards**:

* BESS, Green Star, BREEAM and LEED provide benchmarks for relevant issues

**References and useful information:**

* Built Environment Sustainability Scorecard [www.bess,net,au](http://www.bess,net,au)
* ASHRAE and CIBSE Commissioning handbooks
* International Organization for standardization – ISO14001 – Environmental Management Systems