

Sustainable Buildings Policy

1. Purpose

The purpose of the Sustainable Buildings Policy (the Policy) is to:

- Ensure the design, budgeting and delivery of Council building projects incorporates best practice sustainable design principles and resource efficient features.
- Provide a clear framework and set of minimum sustainable building standards to guide officer decisions about new buildings, building maintenance, upgrades, demolition and renewal.

2. Goals

The Policy and associated minimum standards aim to:

- Improve the energy and water efficiency of Council's buildings and facilities.
- Reduce the environmental impacts of constructing, refurbishing and operating Council buildings.
- Reduce the ongoing operational and maintenance costs associated with Council's buildings.
- Provide a healthy indoor environment and improved comfort levels.
- Improve resilience of buildings to climate change, extreme weather events and the rising costs of utilities.
- Demonstrate corporate responsibility and leadership to the community by acting on Council's climate emergency declaration.
- Assist Council to achieve its zero net emissions target by reducing total operating greenhouse emissions.

3. Scope

This Policy applies to and includes provisions for all new Council building projects, asset renewal, extensions to existing facilities, building maintenance works, and demolition.

This policy establishes minimum sustainable design requirements for different types of building projects as well as the process for applying these standards.

This policy includes the Environmentally Sustainable Design (ESD) Minimum Standards Selection Tool - A list of ESD performance standards for building fabric, equipment, materials, and fittings; designed to suit all maintenance and building project works undertaken by Council where a Green Star Rating is not required. This tool sits as a separate excel document to be used actively by project managers and building maintenance officers to scope works and ensure compliance with minimum Policy standards throughout a project.

4. Policy Statement

It is policy that:

- All new Council building projects, asset renewal, extensions, building maintenance works, and demolition comply with the minimum requirements set out in **Table 1**.
- Sufficient budget (usually 5-10%) is allocated to achieve the minimum standards set out in this policy and the associated ESD Minimum Standards Selection Tool.

Table 1 – Minimum ESD Requirements

Building Project Type	Minimum ESD Requirements
<p>Major New</p> <p><i>All new building works with a total design and construction value of \$6M or more</i></p>	<p><u>Sustainability Management Plan</u> with:</p> <p>Green Star Buildings – Certified 5 Star (as a minimum with consideration to 6 star rating on an individual project basis)*; <u>and</u></p> <p>STORM score of 100% or equivalent in MUSIC tool; <u>and</u></p> <p>NABERS rating tool where applicable: Energy & Water: 5 Stars</p>
<p>Major Upgrade</p> <p><i>Major upgrade or extension of existing building with a design and construction value of \$2M or more.</i></p>	<p><u>Sustainability Management Plan</u> with:</p> <p>Green Star Buildings – Targeted 5 Star rating; <u>or</u></p> <p>Council ESD Minimum Standard Selection Tool <u>and</u></p> <p>STORM score of 100% or equivalent in MUSIC tool; <u>and</u></p> <p>NABERS rating tool where applicable: Energy & Water: 5 Stars</p>
<p>Medium New</p> <p><i>All new building works with a total design and construction value of \$2M to \$6M</i></p>	<p>Green Star Buildings – Certified 5 Star rating for buildings with regular occupancy and higher energy profiles (e.g. Kindergarten, Library); <u>or</u></p> <p>Council ESD Minimum Standards Selections Tool[#] for buildings with low energy requirements and irregular usage (e.g. sports pavilion, community hall); <u>and</u>:</p> <p>NABERS rating tool where applicable: Energy & Water: 5 Stars</p>
<p>Minor New Significant Upgrade¹ Renewal¹ Minor Works¹ Maintenance & Other</p>	<p>Council ESD Minimum Standards Selection Tool</p> <p><i>Reports on upgrades to fittings and fixtures that occur through projects or routine maintenance to be provided to Council’s Environment Unit on a quarterly basis. These reports will be used to track building performance against works.</i></p>
<p>Furniture and Equipment Fit-out (Tenant Fit-out)</p>	<p>Council ESD Minimum Standards Selection Tool</p> <p>Lease conditions to include ESD minimum requirements for equipment (e.g. fridges) and fit-out.</p>

Building Project Type	Minimum ESD Requirements
Demolition	Minimum 70% to be recycled or reused. Review options to re-use on site or elsewhere within Council.

* Project Managers to provide a cost benefit analysis comparing a 5 Star with a 6 Star Green Star standard, including an estimated environmental benefit for consideration by Council during the most appropriate design phase of a building.

As a general rule Green Star is to be used for buildings with regular occupancy and specific conditioning requirements as well as for buildings with higher baseline energy consumption.

¹ESD minimum standard only applies to area of building/works incorporated in project scope. Scope should reflect potential ESD upgrades enabled by works i.e. replacement of roof sheeting should incorporate upgraded insulation and rainwater collection.

5. Policy Implementation

Project Managers are responsible for implementing this policy through the planning, design, construction and maintenance of Council facilities. This guide is to assist the Project Manager in assigning a project category (Table 2), selecting the relevant minimum ESD requirements (Table 1), and ensuring compliance throughout the project lifecycle.

Consultants and contractors are to be provided with a current version of this Policy and a project-relevant version of the ESD Minimum Standards Selection Tool document to detail relevant ESD scope of works and ensure compliance throughout the project.

5.1 Assessing the Project Category

In order to determine the minimum ESD requirement for a project (Table 1), Project Managers are first required to establish the project category for any new building or maintenance project. Categories are based on design and construction cost, scope of work, and the varied ability of different projects to produce cost effective sustainability outcomes.

Table 2 – Project Category

Building Project Type	Building Project Inclusions	Project Examples
Major New	All new building works with a total design and construction value of \$6M or more	Libraries, Aquatic and Recreation centres, Sports Stadiums, Offices /Town Halls, Larger Community Centres, Arts, Tourism & Entertainment Centres
Medium New	All new building works with a total design and construction value of \$2M to \$6M	Larger Sporting Facilities, Kindergartens, Maternal and Child Health Centres, Smaller Community Centres, Neighbourhood Houses
Minor New	All new building works with a total design and construction value of up to \$2M	Sporting Pavilions, Toilet Blocks, Community Halls, Sheds, Outbuildings
Major Upgrade	Major upgrade or extension of existing building with a design and construction value of \$2M or more	Upgrades or Expansion Aquatic and Recreation centres, Sports Stadiums, Offices/Town Halls

Building Project Type	Building Project Inclusions	Project Examples
Significant Upgrade	All upgrade or extension work from \$200,000 to \$2M	Upgrade or Expansion of Kindergartens, Maternal and Child Health Centres, Tourism Centres
Renewal	Works to refurbish or replace existing facilities with facilities of equivalent capacity up to \$200,000	Renewal of Sports Pavilion or Public Amenity Building, Retrofit + Upgrade Projects, Replacement of a Roof
Minor Works	Partial retrofit or replacement of existing plant or building construction	Replacement of HVAC system, pool plant works, window/door replacement.
Maintenance	All routine and reactive maintenance	Replacing a hot water unit, light fittings, toilet etc. (not applicable to replacement of parts within a system, eg. broken window, HVAC component replacement etc.)
Furniture and Equipment Fit-out	Bulk procurement of furnishings or fittings for new facility or as part of upgrade.	New furniture for staff offices or library. Equipment installed in kitchens of council owned buildings. IT or AV infrastructure.
Tenant Fit-out	Internal fit-out of facilities leased to MRSC. Fit-out requirements included as lease conditions for facilities owned by MRSC and leased to other parties.	Lancefield Kindergarten (leased to MRSC) Woodend Depot Office (leased to MRSC) Woodend Cobaw Health (leased to other)
Demolition	All demolition works above 10m ³	The complete or partial demolition of an asset
Other Structures	Ancillary structures not part of larger project, Structures in Parks or Reserves	Sail and Shade structures, Shelters, BBQs, Band Stands, Boardwalks, Playgrounds

5.2 Implementation

To ensure successful implementation of this Policy it is important that project managers confirm that the ESD minimum standards are being met throughout the life of a project.

Table 3 – Policy Implementation

Project Phase	Implementation Requirements
Project Initiation/Inception <i>(Project ESD budget to be set as part of business case)</i>	Project Manager to assess project type (Table 2) and assign relevant ESD minimum requirement (Table 1) Where use of the Council ESD Minimum Standards Selection Tool is a requirement, Project Manager to determine the project specific requirements and include in scope.

Project Phase	Implementation Requirements
	Project sponsor/project manager to ensure appropriate budget is set aside at business case stage to ensure compliance with this Policy.
Concept Design <i>(hold point for review)</i>	Ensure concept complies with ESD minimum standards requirements; specifically, building envelope elements such as compactness, orientation, shading, daylight, ventilation and windows.
Schematic Design <i>(hold point for review)</i>	Ensure schematic design complies with ESD minimum standards and clearly denotes conditioned spaces, ventilation strategies, and location of onsite renewables.
Detailed design Contract Documentation	ESD minimum standards section tool to be completed as part of detailed design and incorporated into project documentation and construction tenders as relevant.
Construction	Construction Environmental Management Plan
Practical Completion	<p>Final sign off of ESD minimum requirements</p> <p>Ensure all tuning and commissioning of building systems has been completed, including blower door testing as required for heavily conditioned spaces.</p> <p>Ensure relevant maintenance programs have been developed as per manufacturer/warranty specifications</p> <p>Ensure completed ESD Minimum Requirements Selection Tool is archived with relevant project records.</p>

5.3 Roles and Responsibilities

This Policy is to be embedded into the project management process and should be considered throughout all stages of a project. The roles and responsibilities for implementing this Policy are outlined below.

Table 4 – Roles and Responsibilities

Role	Responsibility
Project Sponsor / Client	<p>General oversight and meet with project manager to determine scope, ESD minimum requirements and associated costs.</p> <p>Determine additional project specific sustainability requirements.</p> <p>Allow for the requirements and relative costs in business cases for budget consideration.</p>
Project Manager	Ensure relevant ESD minimum requirements are included in scope and project tender documentation and contracts as required.

Role	Responsibility
	Ensure ESD minimum requirements selection tool is completed, review non-conformances, ensure document is saved along with other project documentation.
Consultants and Contractors	Consultants must provide completed SMP and ESD Minimum Standards Selection Tool document at end of design development and construction phases. The design is to meet these minimum requirements with approval required for any non-complying elements.
Environment Unit (subject to resources)	Review non-conformances, project ESD minimum requirements selection tool and provide general ESD advice.
Independent Commissioning Agent/ESD Advisor	Provide independent project review and advice relating to ESD implications. Provide certification as applicable to Green Star projects.

6. ESD Minimum Standards Selection Tool

The ESD Minimum Standards Selection Tool is an MS Excel document that sets out the minimum ESD requirement relevant to building, renewal and maintenance projects. The tool is designed to be integrated with Council's existing project management framework and enables project managers to:

- Clearly scope project ESD requirements at project inception
- Track compliance with ESD requirements by project architects, consultants, and construction contractors

The Tool must be used by project managers to determine the project specific ESD scope of works section of design briefs or tenders issued by Council.

ESD Minimum Standards Selection Tool does not apply to projects targeting a Green Star Rating. The Green Star Design and As Built submission guidelines will form the main ESD guiding document in these cases.

The requirements set out in the ESD Minimum Standards Selection Tool do not replace the minimum energy efficiency or other general requirements in the National Construction Code (NCC).

7. Policy Non-compliance

In the event that a project is not able to comply with the Sustainable Design Policy or ESD Minimum Standards Selection Tool, the exemption must be approved by:

- The Project Control Group (if one exists for the project); or
- The Director Assets and Operations (if no Project Control Group exists)

The exemption should be justified by a Life Cycle Cost assessment.

8. Phased Introduction

Implementation of the Sustainable Buildings Policy will occur in two stages:

1. 2021/22 – Use of the minimum sustainable design standards where existing project budgets allow.
2. 2022/23 onwards - Capital works business cases and budget bids must be scoped and costed to comply with the Sustainable Building Policy.

9. Abbreviations and Definitions

Asset: Within Macedon Ranges Shire Council assets are managed by Council on behalf of the community to provide a broad range of services. Assets are a physical component of a facility, which has value, enables services to be provided, and has an economic life of greater than 12 months. These assets include roads, drains, buildings and facilities, open space, plant & equipment, library materials, art works and land.

Built Environment Sustainability Scorecard (BESS) – Developed by the Council Alliance for a Sustainable Built Environment (CASBE), BESS assesses energy and water efficiency, thermal comfort, and overall environmental sustainability performance of new buildings or alterations. It was created to assist builders and developers to demonstrate that they meet sustainability information requirements as part of planning permit applications.

Environmentally Sustainable Development (ESD): Building design that seeks to improve performance, reduce environmental impacts, resource use and waste and create healthy environments for occupants. Council promotes environmental sustainable developments in order to meet its high level environmental targets. ESD commonly includes achieving or exceeding ‘best practice’ standard for buildings, infrastructure, transport, landscaping and streetscapes.

Green Building Council of Australia (GBCA): The Green Building Council of Australia

Green Star: Developed by the Green Building Council of Australia (GBCA), buildings can be Green Star certified for the environmental sustainability of their construction (Design and As-Built tool); fit outs (Interiors tool) and their operational performance (Performance tool). Buildings are accredited through an assessment by a third party and can achieve between a 4-6 star accreditation.

Independent Commissioning Agent (ICA): A role that can be filled by one or more people who are appointed by, and report directly to, Council. They are independent of any contractor, sub-contractor or consultant who has been involved in the design or installation of the nominated building systems. They are a registered professional engineer or qualified technician with demonstrated knowledge on mechanical, electrical, hydraulic and ESD systems commissioning.

Integrated Water Management (IWM) and Water Sensitive Urban Design (WSUD): A holistic approach to water management that integrates urban design and planning with social and physical sciences in order to deliver water services and protect aquatic environments in an urban setting. A WSUD approach could include the integration of raingardens, infiltration, water harvesting and wetlands in an urban area to manage stormwater.

Lifecycle cost (LCC): The total cost of an asset throughout its useful life taking account of the planning, design, construction, acquisition, operational, maintenance, rehabilitation, and disposal costs.

Lifecycle Analysis (LCA): A total assessment of the environmental impact across the entire lifecycle from manufacture construction, operation, and disposal.

MUSIC: A model that predicts the performance of stormwater quality management systems using the licensed MUSIC software available for download at <http://www.ewater.com.au/products/music/>

NABERS (National Australian Built Environment Rating System): NABERS measures an existing building's environmental performance during operation. NABERS rates a building on the basis of its measured operational impacts in categories such as energy, water, waste, and indoor environment quality. Currently NABERS only officially rates offices, hotels, shopping centres and homes. Further tools are under development for schools, retail buildings, hospitals and data centres.

PPA: Power Purchase Agreement – MRSC

Sustainable Design Assessment (SDA): A simple sustainability assessment for small projects that documents how a project will address sustainability objectives, targets and standards.

Sustainability Management Plan (SMP): Sets out the sustainable design features of large developments and it provides more information about how the performance outcomes will be achieved (including implementation schedules).

STORM: An assessment of stormwater runoff and on-site treatment against best practice targets, using the free STORM calculator, available online at <http://storm.melbournewater.com.au/>