

# SCS-055 Sustainable Design Policy

TRIM Reference:  
D24/109866

Due for Review: July 2028

Responsible Officer: Manager Environment and Sustainability

## 1. Purpose:

This policy outlines Surf Coast Shire Council's (Council) commitment to best practice Environmentally Sustainable Design (ESD), ensuring climate change mitigation and adaptation considerations are incorporated into the design, construction, operations, and demolition works of new Council facilities, significant facility upgrades/renewals, civil works, and open space projects.

## 2. Policy Principles:

To guide informed sustainable design decisions, this policy is underpinned by five principles:

### **Principle One: Environmental Sustainability**

This policy promotes environmentally responsible design decisions across the lifecycle of Council's facilities, civil works, and open space projects, through consideration of emissions reduction, energy and water efficiency, circular economy, and environmentally responsible specifications.

### **Principle Two: Design for Social Benefit**

This policy encourages sustainable design decisions to support social benefit across the organisation and Surf Coast community. Consideration of the health, comfort, well-being, and accessibility of all building occupants is encouraged; as well as responsible design decisions to support environmental quality for upcoming and future generations.

### **Principle Three: Economic Sustainability**

This policy promotes design and specification practices which support investments of value, with consideration of the through-life economic sustainability of assets. The financial value of ESD lies in the reduction potential of operational lifecycle costs associated with asset management, including reduced utility costs, reduced carbon offsetting requirements, and increased timeframes for maintenance and renewal.

### **Principle Four: Local Resilience**

This policy promotes appropriate design decisions for climate adapted buildings, recognising that future-oriented decision-making can positively influence disaster mitigation and emergency response challenges. The climate conditions of Surf Coast Shire are changing, with worsening extreme weather events (particularly regarding increased frequency and severity of high-risk fire days and heatwaves); while Surf Coast Shire is already one of the most bushfire prone areas of the world. It is imperative that Council's facilities are designed appropriately for climate change risk and resilience.

### **Principle Five: ESD Leadership**

Through informed design decisions and best practice ESD in Council's facilities, this policy supports Council's commitment to demonstrating climate emergency leadership. It is recognised that the design of buildings, civil works, and open space can positively influence environmental outcomes in other sectors, including (but not limited to): sustainable transport mode-shifts, circular economy promotion, waste reduction, biodiversity promotion, and stormwater quality improvements.

### 3. Scope:

This policy applies to buildings owned, leased, or managed by Council, as well as civil works programs and open space projects (as outlined below), and sets minimum ESD standards for Council's:

- New buildings and facilities;
- Significant renewals and upgrades of existing buildings and facilities;
- Projects within civil works programs in relation to the following: roads, cycling paths (on-road and off-road), pedestrian paths, and drainage infrastructure;
- Open space projects in relation to the following: sports fields, parks, playgrounds, nature reserves, shopping precincts, and other open space assets (for example gates, bbqs, and shelter structures);
- Appliance and scope to budget renewal programs subject to specific criteria in Council's ESD standards (as outlined in Table 2), for example air-conditioning and hot water units.

#### 3.1. Types of Buildings and Facilities:

This policy applies to all types of Council's buildings and facilities including: administrative offices, leisure and aquatic facilities, sports courts, libraries, community buildings, recreation reserve facilities, town halls, childcare/kindergartens and health centres, works depots, and other Council buildings.

#### 3.2. Adherence with policy Scope:

Adherence with this policy applies to all employees and contractors of the Surf Coast Shire Council engaged in the design, construction, management, and operation of Council facilities, civil works programs, and open space projects.

#### 3.3. Exclusions from Scope:

This policy does not apply to:

- Minor routine maintenance activities which don't relate to replacement of appliance, lighting, plumbing fixture, or recycled content material.

### 4. Policy Context:

This policy is aligned within state and local government climate action strategies, as listed below.

#### 4.1. Victorian State Government Alignment:

- The Victorian State Government *Local Government Act 2020* Governance Principles, as outlined in Table 1 (page 3).
- The Victorian State Government *Climate Change Act 2017*, which includes objectives to:
  - reduce greenhouse gas emissions;
  - improve infrastructure, built environment, and community resilience;
  - promote ecosystem and biodiversity resilience;
  - promote intergenerational equity.
- The Victorian State Government *Climate Change Strategy and 2035 Emissions Reduction target*, which includes commitments to greener and more energy efficient commercial buildings, and overall targets of reducing Victoria's emissions from baseline 2005 levels by:
  - 28-33% by 2025;
  - 45-50% by 2030;
  - 75-80% by 2035;
  - Net zero by 2045.

#### 4.2. Surf Coast Shire Council Alignment:

- Council's declaration of a Climate Emergency, which calls for accelerated action to reduce greenhouse gas emissions within our organisation and community.
- Council's *Climate Emergency Response Plan 2021-2031* (which also constitutes Council's local government emissions reduction pledge under the *Climate Change Act 2017*), includes goals towards:

- Becoming a carbon neutral organisation, by reducing Council's scope 1, 2, and 3 corporate greenhouse gas emissions (Goal 1);
- Generating, storing, and using renewable energy at Council sites and facilities (Goal 2);
- Improving organisation adaptive capacity and resilience to a changing climate (Goal 3);
- Demonstrating leadership on climate action (Goal 6).
- Surf Coast Shire Council's *Circular Economy Action Plan 2024-2027*, which includes key priorities towards:
  - avoiding waste and increasing resource recovery (Priority 1);
  - maximising reuse (priority 2);
  - creating systems change (priority 4).

**4.3 Surf Coast Shire Council Emissions Context:**

This policy recognises that greenhouse gas emissions related to the construction and operation of buildings are significant. This includes both upfront emissions (created during construction processes and embodied emissions of building material production and transport), and operational emissions (created through ongoing energy and water use, and refrigerant leakages). Historically, emissions related to the operation of buildings and facilities has contributed to approximately 40% of Council's corporate greenhouse gas emissions, when excluding emissions from the Anglesea Landfill.

**5. Applicable Local Government Act 2020 Principles:**

Local Government Act 2020 Principles:	Applicable to policy:	Details:
<p><b>Governance Principles</b> (Consideration of the Governance Principles under s.9 of LGA 2020)</p>	<p>Yes</p>	<p><i>S.9(2)(b) Priority is to be given to achieving the best outcomes for the municipal community, including future generations;</i>  <i>S.9(2)(c) The economic, social, and environmental sustainability of the municipal district, including mitigation and planning for climate change risks, is to be promoted;</i>  <i>S.9(2)(e) Innovation and continuous improvement is to be pursued;</i></p>

*Table 1: Applicable Local Government Act 2020 Principles*

**6. Policy Objectives:**

The objectives of this policy are to:

- Demonstrate environmental leadership and climate action reflective of a climate emergency through Council facilities and assets.
- Ensure new Council facilities, upgrades, and renewals generate positive environmental outcomes and do not negatively impact the environment and climate.
- Ensure all new major Council facilities are carbon neutral developments over the entire facility lifecycle.
- Ensure the efficient use of resources including electricity, water, and construction materials.
- Avoid consuming fossil fuels, including a transition away from gas at all Council facilities.
- Reduce the ongoing costs associated with managing Council's buildings, through reduced utility bills and carbon offsetting requirements.
- Improve comfort, health, wellbeing, and productivity outcomes for facility users.
- Promote renewable energy generation by incorporating solar systems at all new facilities.
- Achieve best practice stormwater quality outcomes, including stormwater capture and reuse at all new facilities.
- Ensure waste avoidance, reuse and recycling during construction, operations, and management of buildings.
- Promote innovation in the delivery of Council facilities, civil works, and open space projects, that not only mitigate their impact on the environment but produce positive environmental outcomes and are appropriately adapted to future climates.

## 7. Policy:

Surf Coast Shire Council is committed to the principles of this policy to guide informed sustainable design decisions. Both minimum ESD standards and additional industry rating tools are used to achieve this. The ESD standards and rating tool requirements for all project types covered by the scope of this policy are outlined in Table 2:

Table Two: ESD Requirements for all projects within Policy Scope	
Total Project Value (Design + Construction)	ESD standards and rating tool requirements:
<b>Major new building and significant building upgrade projects (&gt;\$5mil)</b>	<ul style="list-style-type: none"> <li>5-star Green Star Buildings certification</li> <li>Adherence with Council's ESD standards (as outlined in Table 3)</li> <li>Allocation of a 5% allowance within the project cost plan for Green Star design and certification requirements from project 'Identify' &amp; 'Initiate' phases</li> <li>Engagement with a Green Star Accredited Professional (GSAP) external consultancy from the beginning of project 'Plan' stage through to project delivery, to develop 5-star certification pathway planning</li> <li>A representative from the Climate Action Team as ESD technical advisor in the Project Steering Group</li> </ul>
<b>Medium new building and building upgrade projects (\$1mil to \$5mil)</b>	<ul style="list-style-type: none"> <li>BESS tool 'Excellence' score of 70%</li> <li>Adherence with Council's ESD standards (as outlined in Table 3).</li> <li>Allocation of a 2% allowance within the project cost plan for ESD Design requirements from project 'Identify' &amp; 'Initiate' phases.</li> </ul>
<b>Small-Medium new building and building upgrade projects (&lt;= \$1mil)</b>	<ul style="list-style-type: none"> <li>BESS tool 'Best Practice' score of 60%</li> <li>Adherence with Council's ESD standards (as outlined in Table 3).</li> <li>Allocation of a 2% allowance within the project cost plan for ESD Design requirements from project 'Identify' &amp; 'Initiate' phases.</li> </ul>
<b>Civil Works programs (as per policy scope)</b>	<ul style="list-style-type: none"> <li>Adherence with Design Component no.11 (Recycled Content Materials) of Council's ESD standards (as outlined in Table 3).</li> </ul>
<b>Open Space programs (as per policy scope)</b>	<ul style="list-style-type: none"> <li>Adherence with Design Component no.2 (Transition away from fossil fuels) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.6 (Energy Efficient Equipment &amp; Lighting) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.11 (Recycled Content Materials) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.14 (Site Biodiversity &amp; Vegetation) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no. 15 (Landscaping Design) of Council's ESD standards (as outlined in Table 3).</li> </ul>
<b>Appliance and Scope to Budget renewal programs</b>	<ul style="list-style-type: none"> <li>Adherence with Design Component no.2 (Transition away from fossil fuels) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.3 (Low GWP Refrigerants) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.6 (Energy Efficient Equipment &amp; Lighting) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.9 (Water Efficient Plumbing Fixtures &amp; Appliances) of Council's ESD standards (as outlined in Table 3).</li> <li>Adherence with Design Component no.11 (Recycled Content Materials) of Council's ESD standards (as outlined in Table 3).</li> <li>Where applicable, adherence with Design Component no.16 (Climate Risk Pre-Screening &amp; Design Response) of Council's ESD standards (as outlined in Table 3). This is applicable for such programs as decking renewal programs.</li> </ul>

Table 2: ESD Requirements for all projects within Policy Scope

**7.1 Council’s ESD standards:**

Council’s ESD Standards are comprised of sixteen targeted design components, as outlined in Table 3:

Table Three: Council’s ESD Standards		
ESD Category	Design Component	ESD Standards
<b>Emissions Reduction</b>	1. Carbon neutral buildings and facilities	<ul style="list-style-type: none"> <li>Greenhouse gas emissions from key quantifiable emission sources associated with construction and operation of buildings and facilities are to be calculated and minimised, with all residual emissions offset as part of Council’s carbon neutrality program.</li> </ul>
	2. Transition away from fossil fuels	<ul style="list-style-type: none"> <li>No new gas installations are to be undertaken. Any gas appliances, including kitchen appliances, hot water units, and heating systems, subject to renewal or upgrade are to be replaced with electric alternatives. Building renewal projects with existing gas appliances must upgrade to electric alternatives.</li> </ul>
	3. Low GWP Refrigerants	<ul style="list-style-type: none"> <li>All new air-conditioning, refrigeration, and/or heat pump units are to utilise natural refrigerants where possible or refrigerants with the lowest Global Warming Potential (GWP) available for the specific application.</li> </ul>
	4. Upfront Carbon Reduction	<ul style="list-style-type: none"> <li>Opportunities to design for dematerialisation in new buildings are to be explored.</li> <li>Low embodied carbon is to be prioritised in material selections, particularly across the following priority materials:               <ul style="list-style-type: none"> <li>- Concrete</li> <li>- Steel</li> <li>- Aluminium</li> <li>- Glass</li> <li>- Asphalt</li> </ul> </li> </ul>
<b>Energy</b>	5. Energy Efficient Building Design	<ul style="list-style-type: none"> <li>For new buildings, a fabric first approach to building design is to be employed, with consideration of optimising thermal envelope efficiency.</li> </ul>
	6. Energy efficient equipment & Lighting	<ul style="list-style-type: none"> <li>All new equipment, appliances, air-conditioning, refrigeration, and/or heat pump units are to have a minimum 5-star energy rating.</li> <li>All new light fixtures (including sports lighting and open space lighting) are to be LED type. Opportunities to specify solar powered lighting are to be explored (eg. Solar bollard lights).</li> <li>Opportunities to specify motion sensor lighting to reduce operational lighting use within buildings are to be explored.</li> </ul>
	7. Renewable energy generation	<ul style="list-style-type: none"> <li>Renewable electricity is to be used to power all facilities.</li> <li>Rooftop solar is to be installed at all new buildings, with on-site battery storage considered where demand may warrant its installation.</li> </ul>
<b>Water</b>	8. Water harvesting and reuse	<ul style="list-style-type: none"> <li>Rainwater tanks are to be incorporated at all buildings to capture rainwater for reuse on site. Rainwater tanks are to be sized with appropriate consideration to on-site demand, including for internal use in buildings and for non-potable uses such as toilet flushing.</li> <li>Where a connection to the recycled water network is available it is to be utilised for appropriate non-drinking water end uses, such as irrigation.</li> </ul>
	9. Water Efficient Plumbing Fixtures & Appliances	<ul style="list-style-type: none"> <li>All new plumbing fixtures and water-using appliances installed must meet the following efficiency rating:               <ul style="list-style-type: none"> <li>- Taps: minimum 5-star WELS rating</li> <li>- Urinals: minimum 5-star WELS rating</li> <li>- Toilets: minimum 4-star WELS rating</li> <li>- Showers: minimum 4-star WELS rating</li> <li>- Dishwashers: minimum 5-star WELS rating</li> <li>-</li> </ul> </li> </ul>
	10. Stormwater Treatment	<ul style="list-style-type: none"> <li>Stormwater runoff from new facilities is to be treated to meet Best Practice Environmental Management (BPEM), including the following criteria:               <ul style="list-style-type: none"> <li>- Suspended Solids – 80% retention of the typical urban annual load</li> <li>- Total Phosphorous – 45% retention of the typical urban annual load</li> <li>- Total Nitrogen – 45% retention of the typical urban annual load</li> <li>- Flows – maintain discharges for the 1.5 year Average Recurrence Interval at pre development levels</li> <li>- Litter – 70% reduction of typical urban load</li> </ul> </li> </ul>

Table Three: Council's ESD Standards		
ESD Category	Design Component	ESD Standards
Circular Economy	11. Recycled Content Materials	<ul style="list-style-type: none"> <li>Recycled content of <math>\geq 15\%</math> is to be specified for procurement of new materials across the following priority areas:               <ul style="list-style-type: none"> <li>Steel</li> <li>Bitumen</li> <li>Concrete</li> <li>Rock/gravel</li> <li>Stormwater pipes</li> <li>Timber (structural)</li> <li>Bollards</li> <li>Fencing</li> <li>Boardwalks</li> <li>Signage</li> <li>Outdoor Furniture</li> <li>Playground Equipment</li> </ul> </li> </ul>
	12. Resource Recovery and Waste Management	<ul style="list-style-type: none"> <li>All demolition works are to divert <math>\geq 80\%</math> of materials from landfill.</li> <li>Opportunities for materials to be salvaged within the local community are to be explored, for example for use by local men's sheds and recycling centres.</li> <li>Building design is to incorporate dedicated areas for adequate operational waste stream bin storage, including consideration of space requirements for future potential additional waste sorting requirements (for example, organics waste bins).</li> </ul>
Building Surrounds & Connectivity	13. Sustainable Transport	<ul style="list-style-type: none"> <li>Where a proposed development incorporates a new carpark or significant renewal/upgrade to an existing carpark (<math>&gt;50\%</math> carpark area), works are to include the installation of:               <ul style="list-style-type: none"> <li>Electric Vehicle charging infrastructure, designed to suit the predicted demand at the project site. Opportunities to invite the private sector to own and operate EV charging infrastructure are to be explored.</li> <li>Adequate Bicycle parking and consideration of bike repair stations</li> <li>Pedestrian connectivity to the local footpath network</li> <li>Wheelchair accessible and pram-friendly carparking options</li> <li>Consideration of adequate rolling accessibility for wheelchairs and prams.</li> </ul> </li> </ul>
	14. Site Biodiversity & Vegetation	<ul style="list-style-type: none"> <li>Projects should apply a strategic approach to native vegetation management and the three steps of avoid, minimise and offset is encouraged for consideration at concept design stage. A strategic approach enables biodiversity values and significant native vegetation to be identified and planned for early in planning processes.</li> </ul>
	15. Landscaping Design	<ul style="list-style-type: none"> <li>Landscaping design is to respond to future climates, including through specification of drought tolerant species and utilisation of the cooling benefits of vegetation and fire risk.</li> <li>Landscaping design must incorporate the design elements and intentions of the <i>CFA Landscaping for Bushfire: Garden Design and Plant Selection Guide</i>.</li> <li>Landscaping design should preference indigenous planting with local provenance, where available and suitable for the specific application.</li> <li>Landscaping design should not include any environmental weeds identified in the <i>Weeds of the Surf Coast Shire</i> booklet.</li> <li>To aid water efficiency, drought tolerant grass species and plant species are to be specified for sporting fields and open space where practicable.</li> <li>Where deemed feasible, Water Sensitive Urban Design (WSUD), permeable pavement, and stormwater infiltration options are to be prioritised to reduce water runoff volumes and contribute to urban cooling.</li> </ul>
Climate Adapted Buildings	16. Climate Risk Pre-screening & Design Response	<ul style="list-style-type: none"> <li>All new facilities and renewals/upgrades taking place in an area subject to a Bushfire Management Overlay are to consult directly with Council's Emergency Management (EM) team during project feasibility and design stages. The EM team will determine if a Bushfire Attack Level (BAL) assessment is required to inform the project design and material specifications.</li> <li>All new facilities or renewals/upgrades are to complete Council's 'Climate Risk and Resilience Pre-screening checklist' in consultation with Council's EM team and Climate Action Team. This checklist is to inform resilience requirements in building design.</li> </ul>

Table 3: Council's ESD Standards

## 7.2 Building Handover and Operational Considerations:

To ensure the benefits of ESD are realised during the operational phase of any new or renewed building, the following must be considered:

- All service equipment must be easily accessible for the purpose of ongoing maintenance
- The benefits of ESD inclusions and/or Green Star design elements are incorporated into the building's management contract
- A representative from the Climate Action Team is to be included in Management contract conversations.

## 7.3 Exemptions and Variations to Council's ESD Standards and rating tool requirements:

### 7.3.1. Exemptions and Variations from Council's ESD standards and rating tool requirements for

- **New buildings and building renewal projects:**

Any recommendations for exclusions or exemptions from Council's ESD Requirements (as outlined in Tables 2 and 3 of this policy) are to be documented in the Project Budget Proposal Document and approved by the Project Sponsor as part of the budgeting process, and decided in consultation with Council's ESD Officer. The ESD elements of scope approved in the Project Budget Proposal will flow through to the Project Charter. To the greatest extent, the ESD requirements outlined in Tables 2 and 3 of this policy are to be implemented.

### 7.3.2. Exemptions and Variations from Council's ESD standards for:

- **Civil Works programs**
- **Appliance and Scope to Budget renewal programs**

Any recommendations for exclusions or exemptions from Council's ESD standards (as outlined in Tables 2 and 3 of this policy) in Council's Civil Works programs and Appliance and Scope to Budget renewal programs are to be decided in consultation with Council's Civil Works, Asset Management, and Climate Action Teams. To the greatest extent, the ESD requirements outlined in Tables 2 and 3 of this policy are to be implemented.

### 7.3.3. Exemptions and Variations from Council's ESD standards for:

- **Open Space projects**

Any recommendations for exclusions or exemptions from Council's ESD standards (as outlined in Tables 2 and 3 of this policy) in Council's Open Space projects are to be decided in consultation with Council's Open Space and Climate Action Teams. To the greatest extent, the ESD requirements outlined in Tables 2 and 3 of this policy are to be implemented.

### 7.3.4. Exemptions and Variations from Council's mandatory ESD standards for Heritage Buildings:

For existing Council facilities with heritage overlays or where buildings are heritage listed, it may not be possible, or practical, to achieve the mandatory ESD and climate adaptation requirements in the delivery of renewal or upgrade projects covered under the scope of this policy. To the greatest extent, the ESD requirements outlined in Tables 2 and 3 of this policy are to be implemented.

## 7.4. Applying Energy Efficiency Improvements to Council's existing building stock:

This policy will ensure ESD and climate adaptation considerations are incorporated into new Council facilities, significant facilities upgrades and renewals, civil works programs, and open space projects. Additionally, to ensure the environmental performance of Council's existing building stock is progressively upgraded, the Business Improvement Program, via the Solar and Energy Transitions Project Control Group, is to be utilised. This program can be accessed to facilitate the following ESD outcomes (where a payback period of less than seven years can be achieved):

- the installation of solar
- energy efficiency upgrades
- transition away from gas at existing facilities

### 7.2.1 Tenanted Council Buildings

For tenanted Council buildings, Council will seek to support and work collaboratively with user groups to pursue funding opportunities and undertake upgrades works to achieve environmental objectives.

## 8. Policy Implementation:

Council has a Project Delivery Framework which standardises how projects are undertaken. To ensure effective implementation of this policy within all projects under policy scope (section 3), the *Sustainable Design Management Procedure* associated with this policy must be followed. This Management Procedure outlines:

- Key ESD actions required at each phase of Council's Project Delivery Framework
- Roles and Responsibilities for ESD implementation within projects

### 8.1 Policy Budgeting in Projects:

To enable appropriate budget allocations for the requirements of this policy within projects, the Project Sponsor(s) must adhere to Table 2, 'ESD Standards and Rating Tool Requirements' as outlined in Section 7 this policy, during the Identify and Initiate phase of Council's Project Delivery Framework. The Project Sponsor(s) must incorporate these requirements within project feasibility, scoping and budgeting work that provides the basis for the Project Budget Proposal.

#### 8.1.1 Projects with Alternative Budget Processes:

##### *Annual Renewal Programs:*

This policy acknowledges that annual renewal programs may follow a different budget process to Council's Standardised Project Delivery Framework. For these projects, the requirements of this policy as outlined in Section 7, Table 2, 'ESD Standards and Rating Tool Requirements', are to be included in the list of candidates for renewal. The list of candidates and associated ESD requirements will flow through to Project Charters for annual renewal programs.

##### *Civil Works Programs:*

This policy acknowledges that civil works programs may follow a different budget process to Council's Standardised Project Delivery Framework. For these projects, the requirements of this policy as outlined in Section 7, Table 2, 'ESD Standards and Rating Tool Requirements', are to be included in civil works contracts.

### 8.2. Roles and Responsibilities:

Roles and Responsibilities for implementing this policy are outlined in the Sustainable Design Management Procedure. It is a requirement of this policy that these roles and responsibilities are incorporated into project processes.

## 9. Definitions:

**Climate Adapted Buildings:** Buildings that are designed and built with consideration given to projected future climate conditions.

**Environmentally Sustainable Design (ESD):** The design, development and renewal of the built environment that simultaneously attempts to minimise the environmental impact of a project while proactively working to enhance environmental outcomes. It is design which aims to achieve the best outcomes for our community and the environment today without compromising outcomes for future generations.

**Global Warming Potential (GWP):** A measurement used to indicate how much a given mass of gas contributes to global warming (Engineers Toolbox, 2008).

**Green Star Accredited Professional (GSAP):** A professional who has successfully completed Green Star Accredited Professional (GSAP) training and accreditation requirements and is currently enrolled in the Green Building Council of Australia's Continual Professional Development program.

**Upfront Carbon:** Emissions created during material production and construction phases of a project, before operational use of a building or infrastructure asset begins (also known as phases A1- A5 of the building lifecycle – see appendix 3) (World GBC, 2019).

**Embodied Carbon:** The emissions associated with material production, use, and end-of-life processes created across the whole lifecycle of a building or infrastructure asset (refer to appendix 3) (World GBC, 2019).

**Social Benefit:** Social benefits arising from built environment design, including intergenerational environmental sustainability, community resilience, community health and wellbeing, and social connection opportunities.

## 10. Related Procedures/Documents:

Sustainable Design Management Procedure

Surf Coast Shire Council's Climate Risk & Resilience Screening Tool

CFA Landscaping for Bushfire: Garden Design and Plant Selection

Weeds of the Surf Coast Shire Booklet

## 11. Future Policy Development:

The following aspects of ESD and Council's built environment are not included within scope of this iteration of the Sustainable Design Policy, however are noted as areas for consideration of sustainable design practices, with the aim of being considered for the next policy version.

- Community projects in partnership with Council
- 6-star Green Star Buildings Certification for Major Building Projects
- Green Star Communities Certification for Council's Precinct Development Projects

## 12. References:

Local Government Act 2020  
 Climate Change Act 2017  
 Victorian Government Climate Change Strategy  
 Victorian Government 2035 Emissions Reduction target  
 Surf Coast Shire Council's emissions reductions pledge under the Climate Change Act 2017  
 Surf Coast Shire Council's Climate Emergency Response Plan 2021-2031  
 Surf Coast Shire Council Plan Incorporating the Health and Wellbeing Plan 2021-2025  
 Surf Coast Shire Council Circular Economy Action Plan 2024-2027

GBCA (2023) A Practical Guide to Reduce Upfront Carbon Emissions, accessed 11.3.24, from <https://new.gbca.org.au/news/gbca-media-releases/reducing-upfront-carbon-at-scale/>

The Engineering ToolBox (2008) Refrigerants - Environmental Properties, accessed 11.3.24 from: [https://www.engineeringtoolbox.com/Refrigerants-Environment-Properties-d\\_1220.html](https://www.engineeringtoolbox.com/Refrigerants-Environment-Properties-d_1220.html)

World GBC (2019) Bringing Embodied Carbon Upfront, accessed 11.3.2024, chrome-extension://efaidnbnmnnibpcajpcglclefindmkaj/https://worldgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2022/09/22123951/WorldGBC\_Bringing\_Embodied\_Carbon\_Upfront.pdf

## 12. Document History:

Version	Document History	Approved by – Date
1	Amended	Council Resolution – 23 November 2021
2	Amended	Council Resolution – 23 July 2024

### Appendix 1: Council's Project Delivery Framework

Project Delivery Process – controlling the project through defined phases/stages						
Identify Phase	Initiate Phase	Plan Phase	Deliver Phase			Close Phase
Idea (Project Proposal)	Verify (Charter)	Details/Method (Project Plan)	Requirements Stage	Purchasing Stage	Implement Stage	Wrap-up and Learn (Closure Report)
Prepare			Do			Review

Figure 1: Council's Project Delivery Framework

### Appendix 2: Information on Industry ESD Rating Tools

**Built Environment Sustainability Scorecard (BESS):** BESS is an assessment tool created by local governments in Victoria, owned by the Municipal Association of Victoria on behalf of the Council Alliance for a Sustainable Built Environment (CASBE). BESS measures and assesses ESD performance of a proposed new building or alteration across nine categories: Management, Energy, Water, Stormwater, IEQ, Transport, Waste, Urban Ecology, and Innovation. Once the assessment is completed a report is produced giving a BESS overall score with 'Best Practice' defined as an overall score of 50% or higher, and 'Excellence' defined as an overall score of 70% or higher. Further information can be found at the BESS website: <http://www.bess.net.au/>

**Green Star:** Green Star is a voluntary environmental sustainability rating system administered by the Green Building Council of Australia, aimed at improving the environmental performance and reducing the climate change impacts of the built environment. The Green Star rating system benchmarks projects across a variety of environmental sustainability categories and then produces an overall 'star' rating, with 5-star considered 'Australian Leadership', and 6-star considered 'World Leadership'. The applicable tool to this policy is the Green Star Buildings tool, which assess buildings across 8 criteria: Responsible, Healthy, Resilient, Positive, Places, People, Nature, and Leadership. Buildings must be independently audited and certified to achieve star status. Further information can be found at the Green Star website here: <https://new.gbca.org.au/green-star/rating-system/buildings/>

### Appendix 3: The lifecycle of a building

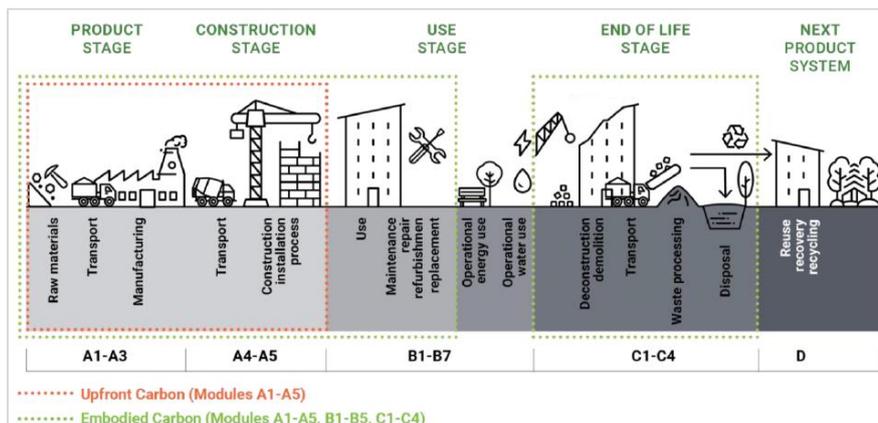


Figure 2: The Lifecycle of a Building. (Image source: GBCA, 2023)