**Sustainable Design Assessment in the Planning Process (SDAPP)**

**Sustainable Design Assessment (SDA)**

Report Template

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**About this document**

*This document provides* ***medium-scale******applicants*** *seeking a planning permit with an SDA Report Template that will help them address the ESD requirements within the City of Port Phillip. The report provides a template to respond to each of the following* ***10 Key Sustainable Building Categories****:*

|  |  |
| --- | --- |
| *Indoor Environment Quality*  *Energy Efficiency*  *Water Efficiency*  *Stormwater Management*  *Building Materials* | *Transport*  *Waste Management*  *Urban Ecology*  *Innovation*  *Construction and Building Management* |

**How to use this document**

*This document is not designed to set a minimum standard or to provide a definitive list of environmentally sustainable design (ESD) initiatives to be included in a development. The ESD response for each development will depend on many site-specific factors. ESD should be integrated into the design of a new building from the earliest stage.*

*The blue text is intended as a guide only and should be deleted prior to submission.*

*The red text highlights sections of the template where the applicant should provide a response.*

|  |
| --- |
| * **ESD initiatives listed in this document are prompts for consideration. Non-relevant initiatives should be deleted from the statement.** * **A Built Environment Sustainability Scorecard (**[BESS](https://bess.net.au/)**) assessment for the proposed development should be appended to this document.** * **Every proposed ESD initiative included in the BESS assessment that involves a significant design feature (e.g. water tanks, skylights, roofing, solar PV etc.) must be shown on the plans to be endorsed with the planning permit. This includes any ESD related building or works under of the building code to the extent that such features can reasonably be detailed at the planning stage.** * **Applicants are encouraged to exceed the benchmark targets contained in BESS as discussed on the BESS website.** * **This document must include references to each of the credits claimed in the BESS report to explain and substantiate each and every initiative claimed.** * **The Sustainable Design Assessment (SDA) and all associated plans and schedules must be consistent with one another.** |

**Project Information**

|  |  |
| --- | --- |
| **Municipality: City of Port Phillip** | |
| **Project Name:**   **Enter Here**  **Project Address:**   **Enter Here**  **Planning Application Number:**   **Enter Here**  **Zoning:**   **Enter Here**  **Applicant:**   **Enter Here**  **Assessment by:**   **Enter Here** | **Total Site Area:**   **Enter Here**  **Residential GFA:**   **Enter Here**  **Number of Res. Dwellings:**   **Enter Here**  **Non-Residential GFA:**   **Enter Here** |

**Environmentally Sustainable Design Initiatives**

*Outline and summarise any general design principles that are applicable to the improved performance of the development (i.e. passive solar orientation and cross ventilation).*

**Built Environment Sustainability Scorecard (BESS)**

|  |  |
| --- | --- |
| The development has been assessed using the BESS assessment tool ([www.bess.net.au](http://www.bess.net.au)).  A summary of the results is shown in the table below. For the full BESS Report please see at **Enter Here – APPEDNIX X** | **Enter Here – BESS Score** |

*Fill in the Summary of Results after completing an ESD assessment on your development using the BESS Tool.*

|  |  |  |  |
| --- | --- | --- | --- |
| **% of Total** | **Category** | **Score** | **Pass** |
| **Enter Here** | **Management** | **Enter Here** | *-* |
| **Enter Here** | **Water** | **Enter Here** | *-* |
| **Enter Here** | **Energy** | **Enter Here** | *-* |
| **Enter Here** | **Stormwater** | **Enter Here** | *-* |
| **Enter Here** | **IEQ** | **Enter Here** | *-* |
| **Enter Here** | **Transport** | **Enter Here** | *-* |
| **Enter Here** | **Waste** | **Enter Here** | *-* |
| **Enter Here** | **Urban Ecology** | **Enter Here** | *-* |
| **Enter Here** | **Innovation** | **Enter Here** | *-* |

**1.0 Indoor Environment Quality**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To achieve a healthy indoor environment quality for the wellbeing of building occupants, including the provision of fresh air intake, cross ventilation, and natural daylight.
* To achieve thermal comfort levels with minimised need for mechanical heating, ventilation and cooling.
* To reduce indoor air pollutants by encouraging use of materials with low toxic chemicals.
* To reduce reliance on mechanical heating, ventilation, cooling and lighting systems.
* To minimise noise levels and noise transfer within and between buildings and associated external areas.

**Considerations:**

* External shading to north, east and west facing glazing

*Provide description of the external shading devices used for the different glazing orientations; fixed for north facing, operable for east and west facing.*

* Access to daylight

*Provide description for all habitable rooms; this should exceed the minimum 10% ratio for windows to floor area and 3% ratio for roof lights to floor area of National Construction Code (NCC) requirements but should not exceed a 20% ratio (windows to floor area) to ensure energy efficiency requirements are achieved.*

* Access to natural ventilation

*Provide description for all habitable rooms; this should exceed the minimum 5% ratio for windows and roof lights to floor area of NCC requirements.*

* External views

*Provide description for how the design provides for external views whilst still addressing overlooking issues.*

* Reduction in volatile organic compounds

*Provide description of intention to provide fitout with elements of low Volatile Organic Compounds (VOC’s) including joinery, paint, carpet, etc.*

**2.0 Energy Efficiency**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To improve the efficient use of energy, by ensuring development demonstrates design potential for ESD initiatives at the planning stage.
* To reduce total operating greenhouse gas emissions.
* To reduce energy peak demand through particular design measures (e.g. appropriate building orientation, shading to glazed surfaces, optimise glazing to exposed surfaces, space allocation for solar panels and external heating and cooling systems).

**Considerations:**

* Energy rating of building fabric in excess of minimum NCC requirements

*Provide preliminary energy ratings, National House Energy Rating Scheme (NatHERS), for residential (demonstrated using energy rating tools such as FirstRate, Accurate and BERS Pro) and for non-residential, National Australian Built Environment Rating System (NABERS) rating, or provide information on how energy efficiency requirements will be achieved.*

* External shading devices to north, east and west facing glazing

*Provide description and show fixed/operable shading devices on relevant elevation/section drawings.*

* Ceiling fans in habitable rooms

*Provide description and show where ceiling fans will be used.*

* Heating system types and associated energy-efficiency rating/benchmark

*At least one star within the best available www.energyrating.gov.au.*

* Cooling system types and associated energy-efficiency rating/benchmark

*At least one star within the best available www.energyrating.gov.au.*

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* Hot water system type and associated energy-efficiency rating/benchmark

*At least one star within the best available www.energyrating.gov.au.*

* Location of fixed clothes drying lines/ racks

*Provide description internal/external and size available, show on relevant floor plans.*

* Lighting strategy

*Provide description and list the main habitable areas considering fluorescent, compact fluorescent, or Light Emitting Diodes (LED) lighting indicating how minimum standards are being exceeded (e.g. residential living areas 5w/m2).*

* Location and size of renewable energy systems including photovoltaic (PV) solar power, solar hot water, wind turbines, geo-thermal etc.

*Provide description and show on relevant floor/roof/site plan drawings.*

**3.0 Water Resources**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To improve water efficiency.
* 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. greywater).

**Considerations:**

* + - Water-efficiency rating of new showerheads

*Provide description, suggested minimum 3 Star Water Energy Labelling Scheme (WELS) rating, 4.5L/min. flow rate (not more than 6.0L/min).*

* + - Water-efficiency rating of new tapware

*Provide description, suggested minimum 5 Star WELS rating.*

* + - Water efficiency rating of new toilet cisterns

*Provide description, suggested 4 Star WELS rating, 3.5L average flush volume.*

* + - Size, capacity and location of rainwater tanks

*Provide description including size, capacity, location, catchment area and where the water is expected to be used (toilet flushing, irrigation, laundry etc.), show on relevant floor/roof/site plan drawings.*

* Provisions for a more water efficient landscaping

*Provide water efficient landscaping description (drought tolerant plant selection, drip irrigation system etc.) and show on relevant floor/roof/site plan drawing or landscape plan if submitted.*

* + - Size and general location of greywater treatment/storage systems

*Provide description, suggested Environmental Protection Agency (EPA) only approved systems, and show on relevant floor/site plan.*

**4.0 Stormwater**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**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 the use of water sensitive urban design, including stormwater re-use.

Considerations:

* Total site area

*Provide description of shape, topography and site area in m² shown on relevant floor/site plans.*

* Total number and area of impervious surfaces and their related treatments prior to off-site release

*Provide a list of all impervious surfaces and related stormwater runoff treatment (rainwater tank, raingarden etc.).*

* Total number and area of pervious surfaces (detention through on-site filtration)

*Provide a list of all pervious surfaces.*

* Provide STORM calculations (www.storm.melbournewater.com.au/)

*Enter municipality (Port Phillip, site area, address, development type and impervious surfaces and their related treatments (if none, select none). A minimum score of 100% is acceptable, print and attach report to this statement and the BESS assessment.*

* Stormwater maintenance

*Describe how stormwater treatment devices will be maintained during the life of the development. Select the appropriate maintenance manual for the stormwater treatment device and attach to this statement (Maintenance Manual Templates are provided for rainwater tanks, raingardens and permeable paving on the Sustainable Design page of our website in the Statutory Planning section).*

* Stormwater management during construction

*Describe how stormwater runoff will be managed during construction. Provide a list or table of the items that will be implemented to deal with; protection of stormwater drains surrounding the site, directing run-off to drains and bunded areas, provision of an on-site wash-down area, material stockpile protection to prevent construction items entering stormwater, provision of rumble strips at vehicle access points, on-site litter containment strategy. Attach to this statement a simple site layout plan of the features.*

**5.0 Building Materials**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To reduce the embodied energy and CO2 impact of materials.
* To maximise the responsible sourcing of materials.
* To maximise the use of recycled material.
* To maximise the reuse of materials.
* To reduce the use of material that contains high levels of VOC (or other toxic elements).

**Considerations:**

* Maximised building retention

*Describe how the development retains as much of the existing building fabric as possible.*

* Reuse of Materials

*Provide information on what materials will be reused within the development or recycled.*

* Recycled Materials Selection

*Provide information on recycled materials selection such as recycled cement content in concrete (%), metal produced from post-consumer waste, recycled timber, recycled material for fit-out.*

* Embodied Energy

*Provide information on how the project will select materials will low embodied energy.*

* Sustainable Timber

*Provide information on the sustainable source of timber (e.g. Forest Stewardship Council (FSC) certified timber or recycled timber).*

* Sustainable Materials - Other

*Provide information on the sustainable materials choice including third party certification, such as GECA or Ecospecifier.*

* Design for Disassembly

*Provide information on how the project will be designed to allow for easy reuse of materials and componentry in the future.*

* Environmental toxicity

*Provide information on how the project will minimise the use of materials that are toxic or have high Volatile Organic Compounds (VOCs).*

**6.0 Transport**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To ensure that the built environment is designed to promote the use of walking, cycling and public transport, in that order.
* To minimise car dependency.
* To promote the use of low emissions vehicle technologies and supporting infrastructure.

**Considerations:**

* Provide convenient and secure bike storage facilities for building users and guests

*Provide the total number of bike storage facilities and ratio to the total number of building occupants and visitors and show on relevant floor/site plans.*

* Provide end of trip change facilities for bike users

*Provide a description of how the design provides end of trip change facilities for bike users and the ratio to the* *total number of on-site bicycle storage spaces.*

* Access to public transport

*Provide a description of the site’s proximity and access to public transport and show on relevant site plan.*

* Access to car share services

*Provide a description of any on or off-site car share service and show on relevant site plans.*

* Reduction in extent of onsite car parking

*Provide a description of any parking dispensation being sought and provide details for consideration e.g. green travel plan.*

* Provision of electric vehicle infrastructure

*Provide a description of the location and type of electric vehicle charging facilities that will be provided.*

**7.0 Waste Management**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To promote waste avoidance, reuse and recycling during the design, construction and operation stages of development.
* To ensure durability and long term reusability of building materials.
* To ensure sufficient space is allocated for future change in waste management needs, including (where possible) composting and green waste facilities.

**Considerations:**

* Allocated space(s) for general waste, recycling and green waste

*Provide a description and information on the plan that details the location of waste, recycling and green waste collection areas.*

* Operation Waste Management Plan

*Provide description of how operational waste (recycling, green waste and general waste) will be managed through the occupied life of the building.*

* Construction Waste Management Plan

*Provide description of how construction waste will be managed through the construction process including material sorting, disposal and targeted recycling rates.*

**8.0 Urban Ecology**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* To protect and enhance biodiversity within the municipality.
* To provide environmentally sustainable landscapes and natural habitats, and minimise the urban heat island effect.
* To encourage the retention of significant trees.
* To encourage the planting of indigenous vegetation.
* To encourage the provision of space for productive gardens, particularly in larger residential developments.

**Considerations:**

* Landscaped areas to be designated

*Describe all new and existing landscaped areas, plus any landscaping to be removed, and indicate how the design has enhanced the site’s biodiversity and provided a net increase in landscaping value. Show on relevant site/floor/landscape plans.*

* Retention and inclusion of native and indigenous vegetation

*Describe how the design has retained native and indigenous vegetation and allowed for drought tolerant native and indigenous vegetation. Show on relevant site/floor/landscape plan.*

* Food production provision in landscape design

*Describe how the landscape design incorporates food production areas, such as veggie gardens.*

* Provision for landscape irrigation

*Describe how landscaping irrigation will be convenient with low water usage, such as drip irrigation for gardens, provision of a tap and drain on balconies.*

**9.0 Innovation and ESD Excellence**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

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

**Considerations:**

* Significant enhancement of best practice ESD standards

*Provide a description of how design exceeds best practice standards in one or more of the other nine categories.*

* Unique sustainable design element or new technology implemented to enhance ESD outcomes

*Provide a description of how the design implements unique/new methods and strategies to enhance design outcomes.*

* Excellent passive design approach

*Provide a description of how the design implements passive design strategies that minimise greenhouse gas emissions aiming to be carbon neutral.*

* Responding to local climate conditions

*Provide a description of how the design responds to local climate conditions which enhance ESD outcomes.*

**10.0 Construction and Building Management**

*Respond to the areas highlighted in red text with commitments made by the applicant.*

**Objectives:**

* Best practice for building management means that sustainability is integrated from concept design through the construction process. Good decisions made early will always deliver the maximum benefit for the lowest cost.
* Best practice building management also means giving future occupants the information they need to be able to run their buildings in the most efficient way.

**Considerations:**

* Construction waste management and recycling

*Describe the demolition and construction waste management plan. Specify the percentage of construction and demolition waste to be recycled.*

* Stormwater management during construction.

*Describe how stormwater will be managed during construction, including how surrounding drains will be protected from construction waste/debris and how materials and construction waste will be contained on site.*

* Preliminary energy rating

*Provide a preliminary energy rating to demonstrate the projected energy efficiency of the proposal (NatHERS for residential, JV3 for non-residential).*

* Tuning of building systems

*Provide a description of how the building systems will be managed to ensure optimal efficiency throughout the life of the development.*

* Building User’s Guide that explains a building’s ESD principles

*Provide a description of intent to provide building occupants with a user’s guide that explains ESD principles.*

* Operation Environmental Management Plan

*Provide a description of any Environmental Management Plans that intend to be implemented during the building’s operation phase.*

* Environmental credentials of project team

*Where known provide a description of any environmental credentials that the project team may have (i.e. Contractor has valid ISO14001 environmental management accreditation, Green Star Accredited Professional, Certified Green Plumber etc.).*

**Supporting Documents**

Assessment Tools:

* Built Environment Sustainability Scorecard (BESS) assessment – [www.bess.net.au](http://www.bess.net.au)
* Green Star – [www.gbca.org.au](http://www.gbca.org.au)
* Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Energy Efficiency:

* Nationwide House Energy Rating Scheme (NatHERS) assessment - [www.nathers.gov.au](http://www.nathers.gov.au)
* National Construction Code (NCC) Volume 2 Part 3.12 assessment - [www.abcb.gov.au](http://www.abcb.gov.au)
* National Construction Code (NCC) Volume 1 Preliminary Section J Report - [www.abcb.gov.au](http://www.abcb.gov.au)
* National Construction Code (NCC) Volume 1 or 2 Glazing Calculator Assessment - [www.abcb.gov.au](http://www.abcb.gov.au)
* National Construction Code (NCC) Volume 1 or 2 Lighting Calculator Assessment - [www.abcb.gov.au](http://www.abcb.gov.au)

Water Efficiency:

* Tankulator Assessment – [www.tankulator.ata.org.au](http://www.tankulator.ata.org.au)

Stormwater:

* Storm Calculator Report – [www.storm.melbournewater.com.au](http://www.storm.melbournewater.com.au)
* Model for Urban Stormwater Improvement Conceptualisation (MUSIC) Report – [www.ewater.org.au](http://www.ewater.org.au)
* Stormwater Construction Management Plan – [Keeping our Stormwater Clean – A Builder’s Guide](https://www.melbournewater.com.au/sites/default/files/Keeping-our-stormwater-clean-builders-guidelines.pdf)

Indoor Environment Quality:

* Daylight Modelling

Transport:

* Walkscore Assessment – [www.walkscore.com](http://www.walkscore.com)