Wyndham City Council

Sustainable Design Assessment in the Planning Process (SDAPP)

Sustainable Design Assessment (SDA)

Report Template

January 2018

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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 **Wyndham City Council.** Medium-*

Please note that this document is a template only and submission of a SDA or SMP report in no way constitutes council issuing a planning permit.

Sustainability Design Assessment Template

(SDAPP) *program within Wyndham City Council should submit a* ***Sustainable Design Assessment (SDA) Report*** *that responds to each of the following* ***10 Key Sustainability Criteria****:*

Indoor Environment Quality	*Transport*
Energy Efficiency	*Waste Management*
Water Efficiency	*Urban Ecology*
Stormwater Management	*Innovation*
Building Materials	*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. ESD should be integrated into the design of a new building from the earliest stage. The best ESD response will depend on many site-specific factors.

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 element options listed in this document are prompts for discussion. Non-relevant elements should be deleted from the statement.**
- **Every proposed ESD initiative included in the BESS assessment that requires a significant building and or works design feature (e.g. water tanks, skylights, roofing, etc.) must be shown on the plans and or described in a schedule to be endorsed with the planning permit. This includes any ESD related building and 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.**
- **The statement must reference each claim for a score and include sufficient detail to explain and substantiate each and every element claimed.**
- **The Sustainable Design Assessment (SDA) and all associated plans and schedules must be consistent with one another.**
- **A Sustainable Design Assessment (SDA) supports but is not a substitute for a Sustainability Management Plan (SMP) where such a detailed plan is required.**

Project Information

Municipality: Wyndham City Council
Project Name: Enter Here **Total Site Area:** Enter Here

Sustainability Design Assessment Template

Project Address: Enter Here
Planning Application Number: Enter Here
Zoning: Enter Here
Applicant: Enter Here
Assessment by: 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). **Enter Here – BESS Score**

A summary of the results is shown in the table below. For the full BESS Report please see at **Enter Here – APPENDIX X**

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:

- Access to daylight

Provide description for all habitable rooms which exceed the minimum 10% ratio for windows to floor area and 3% ratio for roof lights to floor area of BCA requirements but not exceeding 20% ratio to ensure energy efficiency requirements are achieved.

- Access to natural ventilation

Provide description for all habitable rooms in excess of the minimum 5% ratio for windows and roof lights to floor area of BCA 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 (eg. 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 BCA requirements

Provide preliminary energy ratings NatHERS for residential (including FirstRate, Accurate and BERS Pro) and for non-residential NABERS Energy, 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

- 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

- 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 LED lighting indicating how min. standards are being exceeded (eg 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 (eg. greywater).

Considerations:

- Water-efficiency rating of new showerheads

Provide description, suggested minimum 3 Star WELS rating than 4.5L/min. but not more than 6.0L/min.

- Water-efficiency rating of new tapware

Provide description, suggested minimum 5 Star WELS more than 4.5L/min. but not more than 6.0L/min.

- Water efficiency rating of new toilet cisterns

Provide description, suggested 4 Star WELS rating more than 4.0L but not more than 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, show on relevant floor/roof/site plan drawings

Provisions for a more water efficient landscaping

Provide description 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 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 area in m² show on relevant floor/site plans

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

Provide a list which documents all impervious surfaces and related treatments

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

Provide a list which documents all pervious surfaces

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

Enter municipality (Wyndham City Council, 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.

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 CO_2 impact of materials.
- To maximise the responsible sourcing 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:

- Storage for Recycling Waste

Provide information on the plan that details the location of waste and recycling collection areas

- Reuse of Materials and other Recycled Materials

Provide information on what materials will be recycled or reused.

- 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. FSC certified timber or recycled timber)

- 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 material that are toxic or have high 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 users and guests 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 ratio to the total number of on-site bicycle storage spaces

- Access to public transport

Provide a description of the sites 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 eg green travel plan

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 of any parking dispensation being sought and provide details for consideration eg green travel plan

- Operation Waste Management Plan

Provide description of how operational 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

Provide a description of all new, existing retained and existing demolished landscaped areas and indicate how the design has enhanced the sites biodiversity and show on relevant site/floor/landscape plans

- Retention and inclusion of native vegetation

Provide a description of how the design has retained native vegetation and allowed for drought tolerant native vegetation show on relevant site/floor/landscape plan

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 9 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 maximise natural resources and 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:

- Tuning of building systems

Provide a description of how the designs building systems are managed to ensure optimal efficiency

- 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 operation phase

- Environmental credentials of project team

Where known provide a description of any environmental credentials that the project team may have (ie 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
- ❑ Green Star – www.gbca.org.au
- ❑ Other_____

Energy Efficiency:

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

Water Efficiency:

- ❑ Tankulator Assessment – www.tankulator.ata.org.au

Stormwater:

- ❑ Storm Calculator Report – www.storm.melbournewater.com.au
- ❑ Model for Urban Stormwater Improvement Conceptualisation (MUSIC) Report – www.ewater.org.au

Indoor Environment Quality:

- ❑ Daylight Modelling

Transport:

- ❑ Walkscore Assessment – www.walkscore.com

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