



# FREQUENTLY ASKED QUESTIONS

## ENVIRONMENTALLY SUSTAINABLE DESIGN

This FAQ  
answers the  
following  
questions

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This page aims to help you with specific information you may be seeking about Environmentally Sustainable Design (ESD) in the planning process.

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# FREQUENTLY ASKED QUESTIONS

**Q. What do the abbreviations stand for?**

**A.** **ESD** – Environmentally Sustainable Design  
**BCA** – Building Code of Australia  
**GBCA** – Green Building Council of Australia  
**IEQ** – Indoor Environment Quality  
**MUSIC** - Model for Urban Stormwater Improvement Conceptualisation  
**NABERS** - National Australian Built Environment Rating System  
**NatHERS** - Nationwide House Energy Rating Scheme  
**SDA** – Sustainable Design Assessment  
**SDAPP** – Sustainable Design Assessment in the Planning Process  
**SMP** – Sustainable Management Plan  
**STEPS** - Sustainable Tools for Environmental Performance Strategy  
**SDS** – Sustainable Design Scorecard  
**STORM** – Stormwater Treatment Objective Relative Measure

**Q. What are the benefits of considering ESD at the planning stage?**

**A.**

- Optimising your building design as early as possible - when it comes at the lowest cost
- Obtaining planning certainty in relation to ESD by addressing Building Code of Australia (BCA) energy efficiency requirements as early as possible
- Factors such as a building's orientation, external shading, re-use of water or the materials used can make a lasting difference to the environment and provide improved indoor comfort
- Building to best practice standards today not only future-proofs occupants against the rising costs of power and water but commonly commands higher property returns in the future

**Q. What is the difference between FirstRate, STEPS, SDS and Green Star?**

**A.** Buildings can be designed to various efficiency and amenity standards. The Building Code of Australia (BCA) outlines minimum necessary standards to meet relevant health, safety, amenity and energy efficiency objectives.

Meeting BCA energy efficiency standards through a 6-Star FirstRate rating does not reflect best practice standard.

The planning tools STEPS and SDS specify benchmarks in different environmental categories. Meeting these benchmarks confirms best practice standard for small to medium scale buildings.

Large scale buildings commonly demonstrate best practice standard by obtaining a Green Star rating (4, 5

# FREQUENTLY ASKED QUESTIONS

## **Q. What ESD considerations are in the building permit process?**

**A.** Some of the 10 Key Sustainable Building Categories will also have to be considered at the building permit stage. A building permit is obtained by complying with Building Code of Australia (BCA) requirements and meeting the conditions of a planning permit.

For example, Energy Efficiency is reflected in the Nationwide Housing Energy Rating Scheme (NATHERS), which determines a dwelling's expected energy demand for cooling and heating. On a scale of 10 stars, zero stars means the building shell does practically nothing to reduce the discomfort of hot or cold weather. A 6 star rating indicates good, but not outstanding, thermal performance. Occupants of a 10 star home are unlikely to need any artificial cooling or heating. In Victoria, an average 6-Star rating will currently achieve minimum compliance but is not considered to be of best practice standard.

Other categories, such as Indoor Environment Quality, Water Resources or Building Materials, are not really covered in the Building Code of Australia. In order to cover not only energy efficiency but all 10 Key Sustainable Building Categories, planning applicants in Darebin are now encouraged to address these matters in their planning application.

## **Q. Does the SDAPP program add to the processing time of my planning permit application?**

**A.** ESD information is treated in the same way as other planning considerations, such as heritage or traffic. It is possible that planning permit applications could be expediated if applicants follow the best practice guidelines in the 10 Sustainable Factsheets and provide information outlined in the SDAPP program.

## **Q. How long will it take me to prepare an SDA?**

**A.** A Sustainable Design Assment (SDA) can be prepared by the applicant and commonly does not need to be prepared by an expert in the ESD field. Assuming that you have considered all applicable Key Sustainable Building Categories during your design phase and you have agreed on a minimum ESD standard, the preparation of an SDA can take as little as an hour. We highly recommend using the free online tools STEPS (residential) and SDS (non-residential) and submitting the printout report with your application.

## **Q. Can the applicant complete a SMP?**

**A.** In most situations a SMP will require expert advice from a suitably qualified person such as an environmental engineer or specialised ESD consultant. The qualifications, skills and experience of any consultant engaged to complete a SMP should be checked by the applicant prior to engaging their services. Being qualified to complete thermal ratings alone may not be sufficient to adequately complete a SMP.

# FREQUENTLY ASKED QUESTIONS

## Q. What information will I need in order to prepare an SDA or SMP?

**A.** An SDA or SMP can be prepared by either using the free online tools STEPS (residential) or SDS (non-residential), using the template report on our website or preparing your own report. A SMP may require the relevant Green Star assessment. In addition to your architectural drawings you will generally require the following information:

For all developments (residential and non-residential):

- Storm rating, a free online tool from Melbourne water that measures your application's storm water management qualities
- Anticipated minimum energy efficiency rating of major appliances for heating, cooling and hot water (energy labeling)
- Anticipated minimum water efficiency rating of taps and fittings (WELS ratings)
- Size and location of any water tanks
- Anticipated light fittings (e.g. compact fluorescent or LED)
- On-site renewable energy devices (if applicable)
- Major construction materials

Residential-only developments will also need to:

- NatHERS (e.g. FirstRate) Report or anticipated minimum standard

Non-residential-only developments will also need to:

- BCA Section J assessment or anticipated minimum standard
- Expected NABERS rating

## Q. When preparing an SDA or SMP, do I really have to know what appliances I will install?

**A.** As part of an SDA or SMP report Council does not expect you to know what appliance models you will be installing in the future. However, we recommend committing to an energy efficiency standard, for example through declaring the lowest expected Star rating for different appliances (commonly heating, cooling and hot water).

## Q. How do I address all 10 Key Sustainable Design Categories when using the STEPS tool?

**A.** The STEPS tool initially covered only some of the 10 Key Sustainable Building Categories: Energy, Peak Demand, Water, Stormwater and Materials. A new feature in the tool, the Sustainable Design Assessment, now also allows you to address the remaining categories by the provision of a new written section (mission statements), outlining project goals.

# FREQUENTLY ASKED QUESTIONS

**Q. Can I use the STEPS tool without having completed a NatHERS (e.g. FirstRate) assessment?**

**A.** An energy rating under the Nationwide House Energy Rating Scheme (NatHERS) will have to be completed for most new dwellings and some extensions at the building permit stage at the latest. However, as the building's orientation, glazing proportions and construction materials largely impact the rating, it is strongly recommended to conduct a preliminary assessment before lodging your drawings for a planning permit. Furthermore, feedback from applicants shows that many designers nowadays use energy rating tools as design tools rather than as compliance tools. Please also bear in mind, should a later energy rating show that you have to amend the building design to meet minimum BCA standards, you might have to apply for an amendment of your planning permit.

At present Darebin recommends thermal assessments for at least 30% of the dwellings in a multi-residential development in varying orientations.

Small developments may use the ratings below:

Climate Zone 21 Melbourne:

5 Stars - 149 MJ/m<sup>2</sup>  
5.5 Stars - 131 MJ/m<sup>2</sup>  
6 Stars - 114 MJ/m<sup>2</sup>  
6.5 Stars - 98 MJ/m<sup>2</sup>  
7 Stars - 83 MJ/m<sup>2</sup>  
7.5 Stars - 68 MJ/m<sup>2</sup>  
8 Stars - 57 MJ/m<sup>2</sup>  
8.5 Stars - 39 MJ/m<sup>2</sup>  
9 Stars - 25 MJ/m<sup>2</sup>  
9.5 Stars - 13 MJ/m<sup>2</sup>  
10 Stars - 2 MJ/m<sup>2</sup>

The above values can be used as an 80% heating and 20% cooling split.

**Q. When using the STEPS tool, do I use the 'Energy' or 'Area Corrected Energy' values of my energy rating?**

**A.** The STEPS tool works with the 'Area Corrected Energy' values.

# FREQUENTLY ASKED QUESTIONS

**Q.** How does STEPS and the SDS tool relate to existing legislation and the Building Code?

**A.** Relationship with Planning & Environment Act 1987

The Sustainable Design Assessment Planning Process (SDAPP) Programme is intended to be fully consistent with the purpose and objectives of planning in Victoria as expressed in the Planning and Environment Act. The submission of SDA or SMP documentation as part of the SDAPP program enables Council, as responsible authority under its planning scheme, to fulfil its duties as required under Section 60 of the Planning and Environment Act (1) (E), in particular its requirement to consider:

"Any significant effects which the responsible authority considers the use or development may have on the environment or which the responsible authority considers the environment may have on the use or development."

Relationship with State Planning Policy Framework (SPPF)

The area of a planning scheme that is consistent throughout Victoria is aimed at fostering development in the interests of net community benefit and sustainable development. For more information refer to Clause 11 of any Victorian planning scheme.

Relationship with National Construction Code

STEPS and SDS are designed to work with NCC or BCA requirements. There may be some overlap between information requested in a STEPS or SDS report, however responding to questions early in the process such as the location of a water tank saves on costly amendments later in the planning and building process.

Refer to:

<http://www.mav.asn.au/policy-services/planning-building/sustainable-buildings/planning-building-systems/Pages/default.aspx>

**Q.** Who do I speak to if I need further information?

**A.** If you would like to discuss your submission in more detail or obtain free expert ESD advice, you can contact your planning case officer, the Statutory Planning counter or Council's ESD Advisor using the contact details below.