







Environmentally sustainable design checklist

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Environmentally Sustainable Design – Checklist

Under the City's planning policy, *Environmentally Sustainable Design in the City of Joondalup*, the City encourages the integration of environmentally sustainable design principles into the construction of all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

Environmentally sustainable design is an approach that considers each building project from a 'whole-of-life' perspective, from the initial planning to eventual decommissioning. There are five fundamental principles of environmentally sustainable design, including: siting and structure design efficiency; energy efficiency; water efficiency; materials efficiency; and indoor air quality enhancement.

For detailed information on each of the items below, please refer to the *Your Home Technical Manual* at: www.yourhome.gov.au, and *Energy Smart Homes* at: www.clean.energy.wa.gov.au.

This checklist must be submitted with the planning application for all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

The City will seek to prioritise the assessment of your planning application and the associated building application if you can demonstrate that the development has been designed and assessed against a national recognised rating tool.

Please tick the boxes below that are applicable to your development.

Siting and structure design efficiency

Environmentally sustainable design seeks to affect siting and structure design efficiency through site selection, and passive solar design.

Does your development retain:

- existing vegetation; and/or
- natural landforms and topography

Does your development include:

- northerly orientation of daytime living/working areas with large windows, and minimal windows to the east and west
- passive shading of glass
- sufficient thermal mass in building materials for storing heat
- insulation and draught sealing
- floor plan zoning based on water and heating needs and the supply of hot water; and/or
- advanced glazing solutions

Energy efficiency

Environmentally sustainable design aims to reduce energy use through energy efficiency measures that can include the use of renewable energy and low energy technologies.

Do you intend to incorporate into your development:

- renewable energy technologies (e.g. photo-voltaic cells, wind generator system, etc); and/or
- low energy technologies (e.g. energy efficient lighting, energy efficient heating and cooling, etc); and/or
- natural and/or fan forced ventilation

Water efficiency

Environmentally sustainable design aims to reduce water use through effective water conservation measures and water recycling. This can include stormwater management, water reuse, rainwater tanks, and water efficient technologies.

Does your development include:

- water reuse system(s) (e.g. greywater reuse system); and/or
- rainwater tank(s) a RW tank to be incorporated into the outdoor activity vegi patch area.

Do you intend to incorporate into your development:

- water efficient technologies (e.g. dual-flush toilets, water efficient showerheads, etc)

Materials efficiency

Environmentally sustainable design aims to use materials efficiently in the construction of a building. Consideration is given to the lifecycle of materials and the processes adopted to extract, process and transport them to the site. Wherever possible, materials should be locally sourced and reused on-site.

Does your development make use of:

- recycled materials (e.g. recycled timber, recycled metal, etc)
- rapidly renewable materials (e.g. bamboo, cork, linoleum, etc); and/or
- recyclable materials (e.g. timber, glass, cork, etc)
- natural/living materials such as roof gardens and "green" or planted walls

Indoor air quality enhancement

Environmentally sustainable design aims to enhance the quality of air in buildings, by reducing volatile organic compounds (VOCs) and other air impurities such as microbial contaminants.

Do you intend to incorporate into your development:

- low-VOC products (e.g. paints, adhesives, carpet, etc)

'Green' Rating

Has your proposed development been designed and assessed against a nationally recognised "green" rating tool?

- Yes
- No . will exceed the min required by Section J of the BCA

If yes, please indicate which tool was used and what rating your building will achieve:

If yes, please attach appropriate documentation to demonstrate this assessment.

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If you have not incorporated or do not intend to incorporate any of the principles of environmentally sustainable design into your development, can you tell us why:

Is there anything else you wish to tell us about how you will be incorporating the principles of environmentally sustainable design into your development:

The building will exceed minimum compliance of BCA Vol 1 Energy Efficiency, in that roof and wall insulation will be higher than the min required. Improved glazing may be incorporated after the Section J energy Report has been completed at CDC stage.

Solartube Solamaster roof lights as shown on the attached plans are provided to enhance natural daylight into all these rooms. Green Schools Report 2013 and Daylight vs Artificial Light Report by The Department of Sustainable Energy Management [Sweden] were used to establish the benefits of natural lighting on children and the roof lights have the added benefit of reducing the energy consumption from artificial lighting.

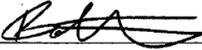
All Artificial lighting will be LED.

There is provision on the north facing roof for for in excess of 5kw of solar panels.

When you have checked off your checklist, sign below to verify you have included all the information necessary to determine your application.

Thank you for completing this checklist to ensure your application is processed as quickly as possible.

Applicant's Full Name: Peter Cottee Building Designs Energy Assessment [Peter Cottee] Contact Number: 0417 930 630

Applicant's Signature:  Date Submitted: 28th Feb 2016

Accepting Officer's Signature: _____

Checklist Issued: March 2011

Map of submitters

ATTACHMENT 5

