# Brisbane City Council Sustainable Development Grants

Guidelines for Office Developments

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A guide to Brisbane City Council's Sustainable Development Grants for Offices



# Brisbane City Council Sustainable Development Grants

Brisbane is a great place to live, work and play, however like many other cities in Australia and elsewhere, we are facing a number of challenges.

Brisbane is a rapidly growing subtropical city, and we are facing unprecedented demands on our water, energy, transport, green space, and air quality. As one of Australia's largest cities, we have a global responsibility in dealing with greenhouse gas emissions, fossil fuel usage and climate change.

Brisbane City Council recently delivered its vision for Brisbane in 2026, which includes the following themes:

- Friendly, safe city
- Clean, green city
- Well-designed subtropical city
- Accessible, connected city
- Smart, prosperous city
- Active, healthy city
- Vibrant, creative city
- Regional, world city

The design and construction of our office buildings will significantly contribute to our vision for Brisbane. Vast quantities of materials (timber, concrete, metals, etc) and energy are required for the construction of offices.

We spend a large proportion of our time inside these buildings, using energy and water, and producing wastewater,  $CO_2$  emissions and waste.

The Sustainable Development Grants Program reflects a commitment by Council to encourage sustainability in the built environment. Measures to achieve this include:

- developing instruments to allow and encourage a greater level of sustainability in housing and business developments
- providing incentives to households, businesses and developers who use sustainable building practices including the reuse of water
- the adoption of new energy-efficient and environmentally sustainable materials and designs, and the use of alternative energy sources.

These guidelines provide you with information on how to apply for Council's Sustainable Development Grants for Offices. It is presented in five sections. The first contains general information for applicants. The second and third outline the application and approval processes. The fourth explains how Sustainable Development Scores are calculated, and the fifth details what evidence applicants must provide.

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## What are sustainable developments?

Sustainable development meets the needs of current generations without compromising the potential of future generations to meet their own needs. In the broad context, 'development' refers to social and economic progress. For the purpose of this grants program, 'development' refers specifically to design and construction projects in the built environment, such as land-use developments, buildings and infrastructure.

Sustainable developments consider social, environmental and economic factors when meeting the needs of current and future generations. Council is committed to working in partnership with the development industry to achieve a sustainable built environment. We can all play a role in protecting our city's future.

Council has a strong commitment to encouraging sustainable development, and we have adopted 15 principles of sustainable development. The following principles are designed to give developers a broad overview of sustainable development.

- 1. Establish agreed sustainable design values.
- 2. Apply an integrated and collaborative design and construction process.
- 3. Design for subtropical place.
- 4. Protect and restore the natural ecosystems.
- 5. Utilise land appropriately.
- 6. Apply integrated water management.
- 7. Manage energy use.
- 8. Select appropriate building materials.
- 9. Manage waste.
- 10. Consider cost efficiency.
- 11. Create healthy indoor environments.
- 12. Support green transport.
- 13. Develop adaptable buildings and spaces.
- 14. Build a safe and diverse community.
- 15. Inform the end owner and user.

## What are the benefits of sustainable office developments?

By encouraging office developments to be more sustainable, Council hopes to achieve the following.

- Facilitate Brisbane's international recognition for its contemporary, environmentally friendly subtropical urban form.
- Facilitate healthy indoor environments.
- Encourage productivity at work.
- Preserve our unique built heritage for future generations.
- Design and construct the built environment in a way that promotes eco-efficiencies, such as minimising energy and water use and improving resource life cycles (reuse and recycling).
- Plan, design and construct our surroundings to enhance urban form and positively contribute to the sustainable management of air quality, vegetation, land, energy and water.
- Manage, protect and enhance our natural ecosystems and green space network, through sensitive design of the built environment.
- Encourage green transport (public transport, bikeways and walkways) and an active lifestyle for residents and visitors.

# > What are the Sustainable Development Grants for Offices?

Brisbane City Council is offering substantial financial incentives to developers who build best practice sustainable office buildings. The grants will be a lump sum payment on completion of the sustainable building.

The Sustainable Development Grants are a first in Australia and possibly the world, due to our holistic approach to sustainability and the considerable size of the grants.

Council has previously offered various incentives to encourage sustainability, including Rainwater Tank Rebates, Sustainable Home and Unit Rebates and Heritage Grants.

Like other rebate and grant schemes, a Sustainable Development Grant will serve as a partial rebate to developers who have invested in sustainability. The grants are not intended to cover the full costs of building a sustainable development.

# Why is Council giving grants to developers?

On a national and international front, governments are driving sustainable development through a combination of mandatory planning initiatives, and market transforming programs such as building and retrofitting incentives.

It is not appropriate or generally feasible to demand world's best practice standards in all new developments. Some elements of sustainability are not currently well suited to regulation (such as green roofs or community space), while other elements are building matters that are outside Council's jurisdiction.

Developers who include sustainability features generally do so at a measurable cost (potentially between 5% and 15% of the total cost of the development). This may translate to savings for the eventual building owners and occupiers, and has considerable benefits to Brisbane, but may not equate to savings for the developer. There are obvious marketing advantages for sustainable buildings, however the extra outlays and effort are still primarily in the realm of the largest, leading developers.

While some developers in Brisbane and other cities are already planning and building more sustainable developments, Council intends to drive an immediate change in Brisbane's built environment by significantly encouraging and rewarding Brisbane's innovative developers who show sustainability leadership.

Council is aware that there are many different kinds of sustainable development incentives, including height bonuses, development assessment incentives and rates rebates. While these will all be investigated in the near future as part of Council's *Sustainable Built Environment Policy*, the Sustainable Development Grants are considered the best way to initiate rapid change, as they are high-impact and apply specifically to the final building.

# > Are the grants an infrastructure charge rebate?

The grants are not an infrastructure charge rebate. They are part of a separate, short-term program funded from the Sustainable Development Grants budget.

Infrastructure charges are not linked to this program, for the following reasons.

- Infrastructure charges service existing and future development, and apply to water, sewerage, waterways (stormwater), community purpose (park) and transport infrastructure. This infrastructure will still be required, whether or not the building is more sustainable.
- Water savings may not necessarily impact on infrastructure expenditure (for example, 50% less water does not equate to 50% fewer pipes or 50% fewer maintenance hours).
- Many sustainability features included in the grants program (e.g. energy, materials, green roofs) have no impact on Council's infrastructure expenditure.

Infrastructure charges are only mentioned when describing these grants in order for Council to ensure the payment amounts are significant enough to encourage developer adoption of sustainability principles. Infrastructure charges are commonly referred to by the development industry and provide a recognised basis for comparison.

#### What about development assessment relaxations?

The grants program does not link to the development assessment process, and the initial Grant Allocation Form cannot be submitted until after Development Assessment (DA) approval.

Developments applying for a Sustainable Development Grant must still comply with all legislative and planning requirements. Non-compliance with development conditions may invalidate the grant allocation and approval.

Depending on the circumstances, Council may refuse a grant allocation request if a development has received significant development assessment relaxations (e.g. for height or use).

# > Who is eligible to apply for a Sustainable Development Grant for Offices?

#### (a) The applicant

- The applicant must:
- (i) if not the landowner, have the written approval from the landowner to apply for the grant
- (ii) not be the Commonwealth, a state or local government (or any agency, authority, instrumentality, statutory entity or related body corporate of any of them).

#### (b) The development

The development, the subject of the application must:

- (i) be built on land within the Brisbane City Council local government area
- (ii) be subject to infrastructure charges
- (iii) be an office building used for professional or commercial purposes and classified as Class 5 under Part A3 of the Building Code of Australia
- (iv) be built pursuant to a development application lodged with Brisbane City Council between 1 May 2006 and 30 June 2009
- (v) achieve a Sustainable Development Score (SDS) of 60 points or above, through a combination of Green Star – Office As Built certification and compliance with Council's additional criteria, when assessed against Table 1 – Office Elements on page 13-14.

#### (c) One grant per development

Only one grant is payable per development.

#### What if my development is a mixed-use development?

The Green Star – Office As Built eligibility requirements are that a minimum of 80% of the building's gross floor area must be Class 5 Commercial Office.

When Council launches a grants program for multi-unit residential developments, there will most likely be incentives to encourage mixed use.

# How much is the Sustainable Development Grant?

A grant payment formula has been developed through public consultation. The following principles applied in developing the formula.

- The grants are linked directly to sustainability performance. The more sustainable the development, the higher the payment. Grants only apply to developments that achieve a Sustainable Development Score of 60 points or more.
- The grants provide an incentive that reflect the financial costs of sustainability, while remaining within Council's budgetary constraints.
- The grants are weighted to provide a motivating incentive to smaller developments as well as to the larger developments. Rather than capping the incentive amounts, a logarithmic function has been used to weight the payments.
- The grants are designed to keep in line with current developer costs and contributions.

The grant payment is calculated using the Sustainable Development Score and the office development size (in square metres of gross floor area), in accordance with the following payment formula:

Grant (Offices) payment (\$) = [7 - log (GFA)] x GFA x SDS x ICU x 0.147

Where:

GFA = gross floor area (m<sup>2</sup>).

- SDS = Sustainable Development Score, i.e. the total number of points achieved by the development, using Table 1 Office Elements on page 13-14.
- ICU = infrastructure charge unit current at the time of paying infrastructure charges. The current ICU is set out in Council's Fees and Charges Schedule. The ICU for 2006/2007 is \$1.42.

#### An on-line calculator for the grant payments is available on Council's website. Visit www.brisbane.qld.gov.au and search for 'Sustainable Development Grants'.

Below are some example payment amounts based on 2006/2007 ICU.

Office size	Sustainable Development Score				
(GFA)	60 points	75 points	90 points		
500m <sup>2</sup>	\$26,930	\$33,670	\$40,400*		
5,000m <sup>2</sup>	\$206,720	\$258,400	\$310,075		
10,000m <sup>2</sup>	\$375,730	\$469,660	\$563,600		
15,000m <sup>2</sup>	\$530,520	\$663,150	\$795,770		
20,000m <sup>2</sup>	\$676,060	\$845,070	\$1,014,090**		

\* equates to about 40% of average developer contributions to Council for this size building.

\*\* equates to about 25% of average developer contributions to Council for this size building.

# How do I calculate my Sustainable Development Score?

The Sustainable Development Score is calculated using the criteria in Table 1 – Office Elements on page 13-14. Detailed information about the criteria is included in section 5 of this document.

# ▶ What is Green Star – Office As Built certification?

Developed by the Green Building Council of Australia, Green Star is Australia's leading holistic environmental rating tool for buildings. Green Star rating tools assess a project's environmental performance against nine environmental impact categories. To obtain Green Star certification, a project must pass a rigorous assessment process and demonstrate best practice (or above) environmental performance.

Please note that for this grant, Council requires certification for 'Green Star – Office As Built' (not 'Green Star – Office Design').

More information on Green Star is included on page 17. For more information, you can also visit www.gbcaus.org or contact the Green Building Council of Australia on (02) 8252 8222.

# Who do I contact for more information?

Write to:	Urban Design/Sustainable Development Incentives Brisbane City Council GPO Box 1434 Brisbane Qld 4001
Telephone:	(07) 3403 8888
Facsimile:	(07) 3403 9072
Email:	sbe@brisbane.qld.gov.au

# > What are sustainable developments?

Grants will be only available to applicants that comply with the following steps.

#### Step 1. Development approval

Obtain Council's approval for the development.

*Please note:* Developments applying for a Sustainable Development Grant must still comply with all legislative and planning requirements. **Non-compliance with development conditions may invalidate the grant approval and allocation.** 

It is recommended that applicants inform Council of their intention to apply for the grant as early as possible, either at a pre-lodgement meeting or when submitting their Development Application.

#### Step 2. Conditional grant allocation approval

Register with Council by completing and submitting the Sustainable Development Grant (Offices) Allocation Request Form and stating the proposed Sustainable Development Score.

*Please note*: It is recommended that applicants submit the allocation request as soon as practicable following development approval.

Allocation requests will be approved at Council's discretion, based on budgetary constraints. Allocation requests will be more favourably viewed if the development:

- has not received other sustainable development incentives from Council
- has not received significant relaxations of planning legislation
- is located on a brownfield or infill site
- is re-using a significant proportion of the existing building
- has not adversely impacted on Brisbane's heritage, landscape asset or ecosystem values.

If Council decides to approve the allocation of a grant, it will be a conditional approval subject to the applicant meeting the proposed Sustainable Development Score and all other conditions imposed. The decision of Council is final.

Applicants will be advised in writing in a Grant Allocation Approval letter of Council's decision within eight weeks.

#### Step 3. Green Star certification

After the issue of the certificate of classification, obtain a *Green Star – Office As Built* certification from the Green Building Council of Australia.

#### Step 4. Grant release

A successful applicant will be entitled to apply for release of the grant when they have satisfied all grant program conditions, including:

- certificate of classification issued by the Department of Local Government, Planning, Sport and Recreation, under the *Building Act 1975*
- Green Star Office As Built certification
- payment of all infrastructure charges owing on the subject property
- compliance with all development conditions and any other specific conditions set out in Council's Grant Allocation approval letter.

To apply for release of the grant, the applicant must submit the following documentation.

- Sustainable Development Grant (Offices) release form
- A Sustainable Development Grant (Offices) assessment report that:
  - demonstrates how the development has addressed each of elements 1 to 9 in Table 1 Office Elements on page 13-14
  - demonstrates that the development has achieved the Sustainable Development Score claimed in the release form, which must be 60 points or greater. This includes evidence that the development has achieved *Green Star Office As Built* certification.
- Documentation and photographic evidence to support all claims made in the report. Evidence for each point claimed must comply with the criteria set out in section 5.

# List of forms and documents

**Sustainable Development Grant (Offices) Allocation Request Form.** This form is used to request that Council set aside grant funding for the project. Submit this form as soon as practicable following development approval.

**Sustainable Development Grant (Offices) Release Form**. This form is used to inform Council that the project is finished and has attained a Sustainable Development Score of 60 points or more, and to request that Council pay the grant. Submit this form once the development has received its certificate of classification and *Green Star – Office As Built* certification.

**Sustainable Development Grant (Offices) Assessment Report**. This report is used to provide Council with detailed evidence that the development has achieved the claimed Sustainable Development Score.

# > When will I know the outcome of my application?

On receipt of the Sustainable Development Grant (Offices) Release Form and associated documents described in step 4 on page 10, Council will make an assessment and provide the applicant with a response within four weeks.

# What if Council disagrees with my claimed Sustainable Development Score?

If Council's assessment of your application results in a lower score than your claimed Sustainable Development Score, you will be notified in writing.

You will be provided with a summary of the approval process and why your development did not meet the eligibility criteria or the claimed Sustainable Development Score.

You will be given the option to either accept the revised score (if the revised score is 60 points or greater), or submit your application again. All applicants will have one opportunity to request a review of the decision.

In the event of a review, you may be able to provide further evidence to support your claimed score, or carry out additional works to meet the claimed score.

Council will conduct a review and make a decision within four weeks of receipt of the application for review. If Council does not approve the application, no further avenues of review are available.

Please note: **The most prudent way to ensure your application is successful is to aim for 6 Star Green Star – Office As Built certification.** Then, if you miss out and only get a 5 Star Green Star certification, you will still be eligible for the incentive (provided all other eligibility criteria are met).

# • What if my grant release application is successful?

If your application is found by Council to have met all eligibility requirements, Council will pay you the full grant amount. The full amount will be calculated using the awarded Sustainable Development Score (as determined by Council), the development's gross floor area, and the infrastructure charges unit for the date on your infrastructure charge receipt (see the complete formula on page 7).

# How do I calculate my Sustainable Development Score?

The Sustainable Development Score (SDS) is the score out of 120 that the development achieves when assessed against Table 1 – Office Elements on page 13-14. The applicant must provide Council with their claimed SDS in the appropriate location on the Grant Allocation form.

To receive a grant, the development must achieve an SDS of 60 points or more.

The SDS will be used to assess a development's eligibility for the Sustainable Development Grant, but also may, in the future, provide a framework for recognising sustainability efforts through other development incentives.

# What are my options for achieving a score of 60 points or more?

To achieve the required 60 points, the applicant must comply with one of the following three options.

#### Option 1. 6 Star Green Star

- The development achieves 6 Star Green Star certification, receiving between 75 and 105 points from the Green Star rating tool.
- The development does not need to comply with any of Council's additional criteria.
- Obtaining additional points from Council's criteria would increase the value of the grant payment.

#### Option 2. 5 Star Green Star

- The development achieves 5 Star Green Star certification, receiving between 60 and 74 points from the Green Star rating tool.
- The development does not need to comply with any of Council's additional criteria.
- Obtaining additional points from Council's criteria would increase the value of the grant payment.

#### Option 3. 4 Star Green Star

The development achieves 4 Star Green Star certification, receiving between 45 and 59 points from the Green Star rating tool.

- Depending on the development's performance, it must make up a number of points from Council's additional criteria. For example:
  - if the development received 45 points in the Green Star rating tool (the minimum required to get 4 Star Green Star), it would need to comply with all of Council's additional criteria (i.e. gain an additional 15 points) to reach 60 points
  - if the development received 55 points in the Green Star rating tool, it would need to obtain an additional five points from Council's criteria.

# > What does the Sustainable Development Score mean?

Your Green Star certification will define your development's 'green building' credentials.

- 45-59 points signify 'best practice'.
- 60-74 points signify 'Australian excellence'.
- 75-100 points signify 'world leadership'.

Achieving additional points from Council's elements in Table 1 – Office Elements demonstrates your commitment to the social and community aspects of sustainability as well.

Any development that achieves a Sustainable Development Score of 60 points is considered by Council to demonstrate excellence in sustainability.

It is expected that very few (if any) developments will be able to achieve a score higher than 100. The range of 120 points is available to allow developers to choose their sustainability elements according to the interests of their customers, their cost structures and other considerations.

Table <sup>•</sup>	1 –	Office	elements
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Element	How to achieve the points	Points	Evidence required	Assessment body
Element 1 Best practice environmental performance	Attain Green Star – Office As Built certification, for either: 4 Star – 45 to 59 points 5 Star – 60 to 74 points 6 Star – 75 to 105 points	45 to 105 points	Green Star certification Certified letter from the Green Building Council of Australia confirming the awarded credits.	Green Building Council of Australia
<b>Element 2</b> Excellence in water and energy management	Attain a Category score of 100% for both the water and energy categories of the Green Star – Office As Built rating tool.	3 points	Green Star certification Certified letter from the Green Building Council of Australia confirming the awarded credits.	Green Building Council of Australia
<b>Element 3</b> Community and stakeholder engagement	Establish a community and stakeholder input mechanism (e.g. community reference group) from the earliest project stage, that has ongoing involvement in the project.	1 point	Documentation (such as copies of advertisements, meeting agendas, minutes, and correspon- dence) demonstrating community reference group involvement at key stages of the devel- opment (concept design, development application, building application).	Brisbane City Council
Element 4 Child care centre access	Locate the development within 400 metres of a licensed child care centre or provide a child care centre within the development itself.	1 point	Plan showing location of the development, and showing the location of a licensed child care centre that is within 400 metres of the development. Evidence that the child care centre is a licensed long-day child care centre or a licensed school-age care centre.	Brisbane City Council

# Section 4: Calculating the Sustainable Development Score

Table 1 – Office elements cont:

Element	How to achieve the points	Points	Evidence required	Assessment body
Element 5 Deep planting	Provide for deep planting of subtropical species canopy trees in an integrated, accessible and landscaped area of the development. Deep planting is provided to 10% of site area and planted with trees able to attain a canopy width of eight metres and up to 15 metres in height to be complementary in scale to the building.	3 points	Evidence showing that provision has been made for deep planting of large canopy trees. Evidence includes plans, specifications, contract/s, photographs.	Brisbane City Council
Element 6 Roof garden/ green roof	Incorporate a significant roof garden in the development that is suitable to the Brisbane climate, accessible to building tenants (and public, if appropriate) which covers at least 35% of the total roof area. A non-potable water supply must be connected for irrigation purpose for any roof garden.	4 points	Evidence of a permanent roof garden incorporated from the earliest design stages. The development must include maintenance facilities for long term maintenance (not hand- watered pot plants). Evidence includes plans, specifications, contract/s, maintenance regime, photographs.	Brisbane City Council
<b>Element 7</b> Sustainability information signs	Incorporate prominent signage in a publicly accessible place describing the sustainability features and benefits of the development.	1 point	Documentation (including plans, specifications, photographs).	Brisbane City Council
Element 8 Community facilities	Foster a positive community by providing a significant neighbourhood facility in the development (such as a skating facility, community food garden, or space that can be used by community groups for information sessions, meetings or art displays).	2 points	Documentation (including plans, specifications, photographs), meetings with community groups. Evidence should show that the facility is an inte- gral part of the develop- ment and not a temporary add-on. Roof gardens cannot claim these points.	Brisbane City Council
Sustainable Dev	elopment Score (SDS) =	120 points available		

# > Are there any essential elements in the Sustainable Development Score?

A development **must** achieve at least a 4 Star Green Star rating to be able to reach a Sustainable Development Score of 60 points or more.

To achieve *Green Star Office – As Built* certification, the project **must** comply with two essential sustainability requirements.

- 1. Ene-1: A minimum base building energy performance rating of four stars using the Australian Building Greenhouse Rating (ABGR) scheme.
- 2. Eco-1: Any new-build projects may not be built on land of high ecological/social value, which is defined as prime agricultural land, or land within 100 metres of a wetland.

# > Why has Council chosen these elements?

The list of office elements is designed to cover the suite of sustainable development principles agreed to by Council.

Other elements were previously proposed, including funding for community organisation contributions, public art, and heritage. Following consultation it has been decided that these elements are either best dealt with through other Council programs, or not appropriate for a built environment focused grant scheme. The final list of elements has been selected based on consultation feedback.

Council has included several social elements, as sustainability requires an integrated consideration of environmental, social and economic factors.

While the allocated points will directly relate to a dollar figure, they are not intended to reflect cost. The points are designed to reflect the relative contribution of a given element to sustainability. There is necessarily a subjective element to the points system, so they are also intended to reflect Council's priorities for Brisbane.

Section 5 contains more information about the specific elements in Table 1 – Office Elements.

# Will Council alter the rating system over time?

The rating system may be revised on an annual basis to keep up with sustainability priorities for the Brisbane region. Your application will be assessed on the rating system that was current at the date of submitting the Sustainable Development Grant (Offices) Allocation Request Form.

*Please note*: The Green Star rating tool is upgraded annually. A failure to achieve Green Star certification will mean your development won't be eligible for the grant. See section 4 for more details.

For more information, contact the Green Building Council of Australia on (02) 8252 8222.

# Element 1. Best practice environmental performance

#### Intent of element

This element is to encourage developments that demonstrate best practice environmental performance.

The following sustainable development principles are addressed by this element.

- Establish agreed sustainable design values.
- Apply an integrated and collaborative design and construction process.
- Protect and restore the natural ecosystems.
- Utilise land appropriately.
- Apply integrated water management.
- Manage energy use.
- Select appropriate building materials.
- Manage waste.
- Create healthy indoor environments.
- Support green transport.
- Inform the end owner and user.
- Build a safe and diverse community.

#### Available points

Forty-five to 105 points will be given where the development attains a rating of 4 stars or greater, when assessed against the *Green Star – Office As Built* rating tool.

The points awarded for this element shall be the Single Score (i.e. overall) score awarded to the development by the Green Building Council of Australia (between 45 and 105).

#### **Evidence required**

To be awarded these points, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- A copy of the Green Star award letter verifying the project's achievement of 4 Star, 5 Star or 6 Star Green Star – Office As Built.
- A copy of the Green Star Credit Interpretations Summary (which accompanied your award letter from the Green Building Council of Australia).

*Please note:* By submitting the Sustainable Development Grant (Offices) Release Form, you are agreeing that, for the purposes of assessing your application, Brisbane City Council may contact the Green Building Council of Australia to verify your *Green Star – Office As Built* rating and Single (overall) Score.

## **General information**

#### What is Green Star Certification?

Green Star is an environmental performance rating tool developed by the Green Building Council of Australia.

Green Star certification recognises projects that have achieved leadership in environmental building design.

Green Star rating tools use stars to rate performance:

- 4 Star Green Star Certified Rating (score 45-59) signifies 'best practice'.
- 5 Star Green Star Certified Rating (score 60-74) signifies 'Australian excellence'.
- 6 Star Green Star Certified Rating (score 75-100) signifies 'world leadership'.

Council is encouraging all new office developments in Brisbane to achieve a Green Star rating.

#### Is there a cost to Green Star certification?

There is a cost involved in achieving Green Star certification. Please visit www.gbcaus.org for more information.

Applicants should do their own calculations but it is likely that the grant amounts will be significantly higher than the costs of Green Star certification. As an example, Green Star assessment and collation costs for a 1,000m<sup>2</sup> building may be about \$12,000. The grant amount for a 5 Star building of this size would be about \$50,000.

Note: The Green Building Council of Australia notes that costs of design activities such as independent commissioning (which can cost up to 2% of construction costs), energy modelling and sourcing green products and material information are not Green Star costs because they should be done as a part of good design practice. These costs are recouped in efficient operation and will further decrease as the product and service providers are more familiar with green building and Green Star.

#### What features are assessed for Green Star?

Projects are evaluated against the following eight environmental impact categories:

Management	Credits address the adoption of sustainable development principles from project conception through design, construction, commissioning, tuning and operation.
Energy	Credits target reduction of greenhouse emissions from building operation by addressing energy demand reduction, use efficiency, and generation from alternative sources.
Water	Credits address reduction of potable water through efficient design of building services, water reuse and substitution with other water sources.
Land use and ecology	Credits address a project's impact on its immediate ecosystem, by discouraging degradation and encouraging restoration of flora and fauna.
Indoor environment quality	Credits target environmental impact along with occupant wellbeing and performance by addressing the HVAC system, lighting, occupant comfort and pollutants.
Transport	Credits reward the reduction of demand for individual cars by both discouraging car commuting and encouraging use of alternative transportation.
Materials	Credits targets resource consumption through material selection, reuse initiatives and efficient management practices.
Emissions	Credits address point source pollution from buildings and building services to the atmosphere, watercourse, and local ecosystems.

Projects can also receive additional credits for innovation in sustainable building.

# ▶ Who is eligible for Green Star – Office As Built assessment?

To be eligible for Green Star certification, the project must meet the following criteria.

- The primary function of the building/tenancy must be an office.
- The building/tenancy must be a Class 5 Commercial Office building as defined by the Building Code of Australia (BCA). For base building projects, a minimum of 80% of the building's gross floor area must be Class 5 Commercial Office. If other BCA classes are present within the building, these areas must be included in the assessment as required by the credit criteria.
- New-build projects may not be built on land of high ecological/social value, which is defined as prime agricultural land, or land within 100 metres of a wetland.
- The project must achieve a minimum Green Star score of 45 in self-assessment (for more information visit www.gbcaus.org).
- The project must achieve a minimum predicted rating of 4 stars using the Australian Building Greenhouse Rating (ABGR) scheme (for more information visit www.abgr.com.au).
- Developers interested in applying for the grant are advised to have a Green Star accredited professional on the design team, to guide them through the Green Star process and to assist in preparing their assessment report.

# What if the standards change while my project is being built, and I miss out on Green Star certification?

Developers should note that the *Green Star – Office As Built* rating tool is amended annually to reflect new information, practices, tools and references. A developer may have to upgrade their design and construction over time in order to keep up with these changes. To keep up with Green Building Council of Australia news, sign up to their e-newsletter at www.gbcaus.org.

If you aim to achieve only the minimum Green Star credits (i.e. 45 points) you run the significant risk that your project may not reach the minimum credits to be eligible for Green Star certification.

Council recommends that you aim for the highest number of points possible, to minimise chances of your development failing to obtain Green Star certification.

Council will not enter into discussions regarding a development's Green Star certification and will refer all queries or comments regarding Green Star to the Green Building Council of Australia.

## For more information

Visit www.gbcaus.org or call the Green Building Council of Australia on (02) 8252 8222.

# > Element 2. Excellence in water and energy management

#### Intent of element

This element is to encourage developments that demonstrate world's best practice water and energy management.

The following sustainable development principles are addressed by this element.

- Apply integrated water management.
- Manage energy use.

#### Available points

Three points will be awarded where the development demonstrates it has attained a category score of 100% for both the water and energy categories of the *Green Star – Office As Built* rating tool.

#### **Evidence required**

To be awarded these points, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- A copy of the Green Star Credit Interpretations Summary (which accompanied your award letter) from the Green Building Council of Australia, which shows:
  - a water category score of 100%
  - an energy category score of 100%.

#### **General information**

Sustainability for Brisbane means maintaining a supply of fresh water and preserving the health of our creeks, rivers and Moreton Bay.

Brisbane will face a number of water supply challenges in coming years.

- Population growth means we can no longer rely on providing water supply from storage dams.
- Residential and industrial growth within Brisbane is placing more stress on our already impacted waterways.
- Better flood management strategies are needed to respond to climate change and to improve catchment management.
- Climate change brings altered rainfall patterns, increased possibility of prolonged dry periods and greater demands on our water supply.

The threat of climate change means that in addition to water efficiency, energy efficiency and renewable energy must be an urgent priority for all of us.

By the year 2010, greenhouse gas emissions from the Australian commercial building sector are predicted to reach 64 megatonnes of CO<sub>2</sub> per year. Most of these emissions come from electricity use from lighting and heating, ventilation and air conditioning (HVAC). Better energy management in commercial buildings will slow down our use of fossil fuels, reduce greenhouse gas emissions and lower energy costs.

The achievement of *Green Star* – *Office As Built* requires a 4 Star Australian Building Greenhouse Rating (ABGR), and in general Green Star certified developments demonstrate a high performance when assessed for water and energy efficiency. This element is designed to encourage developers to go even further with energy and water initiatives.

Anecdotally, achieving full credits in the Green Star water and energy categories could result in an 80-100% reduction in non-renewable energy use and a 50-85% reduction in potable water use.

General information about the Green Star - Office As Built rating tool can be found on page 13-14.

# For more information

Visit www.gbcaus.org or call the Green Building Council of Australia on (02) 8252 8222.

Visit the Australian Greenhouse Office website at www.greenhouse.gov.au/buildings/publications/ pubs/commbuild.pdf for a copy of the report on Australian Commercial Building Sector Greenhouse Gas Emissions 1990-2010.

# > Element 3. Community and stakeholder engagement

#### Intent of element

This element is to encourage developers to consult with the community throughout the construction process, to provide local input, to reduce potential conflict and to ensure the sustainability intentions are achieved.

Community reference groups provide a forum for two-way exchange of information between the developer and the local community relating to the design and construction of the development.

The following sustainable development principles are addressed by this element.

- Establish agreed sustainable design values.
- Apply an integrated and collaborative design and construction process.
- Build a safe and diverse community.

#### Available points

One point is available if the applicant demonstrates that a community and stakeholder input mechanism (e.g. a community reference group) is established from the earliest project stage, and has ongoing involvement in the project.

#### **Evidence required**

To be awarded these points, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- Documentation (such as copies of advertisements, meeting agendas, minutes and correspondence) demonstrating community involvement at key stages of the development process. This could include records of a community reference group with representatives from:
  - government agencies
  - non-government organisations
  - the community including traditional owners.
- Records of surveys, workshops and public feedback sessions must include evidence that the community's input has been significantly incorporated into the design and construction of the development.

#### General information

Once the design team has been commissioned it is important to clearly communicate the desired outcome and sustainability features to all members of the design team, Council, community, and end users. This will reduce potential conflict and ensure that the sustainability intentions are achieved in line with the needs and aspirations of the local community.

Communities vary in their knowledge about planning and sustainability concepts, so it is useful to listen to their input as experts about their local community, as well as offer opportunities for them to learn more.

Other consultative exercises with the broader community should be considered, such as workshops and public information sessions.

# For more information

Contact Council on (07) 3403 8888 and ask for the Urban Design Team, or send an email to sbe@brisbane.qld.gov.au.

Visit the Queensland Government's 'Get Involved' website at www.getinvolved.qld.gov.au for a range of information about community engagement.

Visit the Queensland Government's Office of Urban Management website at www.oum.qld.gov.au for a copy of the *Strong Communities* handbook.

# Element 4. Child care facilities

#### Intent of element

This element is to encourage developers to include child care facilities within their office development, or locate their development within walking distance of a child care centre.

The following sustainable development principles are addressed by this element.

- Apply an integrated and collaborative design and construction process.
- Utilise land appropriately.
- Support green transport.
- Build strong communities.

#### Available points

One point is available if the applicant demonstrates that the development is located within 400 metres of a licensed centre-based child care centre, or that a licensed centre-based child care service is provided within the development itself.

#### **Evidence required**

To be awarded this point, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

• A cadastral plan clearly marked with the location of the development, and the location of the nearest licensed centre-based child care service. The plan should be of a scale that demonstrates that the property boundary of the centre based child care service is within 400 metres *walking distance* (not a straight line) to the property boundary of the development.

If the centre based child care service is **not** attached to the development, the applicant must provide the following.

- Evidence that the unattached child care centre is licensed as one of the following:
  - long-day child care centre
  - kindergarten
  - limited-hours care services
  - school-age care services.

Schools, licensed home-based care and licensed occasional-care services are excluded.

The applicant should conduct a text-based search at www.communities.qld.gov.au/childcare/search/text and print out the results, showing the child care centre is registered with the Queensland Government Department of Communities.

If the child care service is attached to the development, the applicant must provide the following.

- Evidence including approved construction plans and drawings of the facility that clearly demonstrate that the facility provided will meet the legislative requirements and minimum standards governing the provision of child care in Queensland.
- Evidence that a licensed centre child care service provider will open and operate the facility within two years of submission of the Sustainable Development Grant (Offices) Release Form (this should include the service provider's contact details and licence number, type of service, and copies of any contracts).

#### **General information**

There are numerous benefits to ensuring that the office development is located within close proximity to a child care facility, including the following.

- Promote best practice in the provision of community services that are responsive to the needs of office workers with dependent children.
- Office workers have better access to their children in the case of illness or emergency, or to participate in their children's activities.
- Work-based support networks are facilitated.
- Nursing mothers have more choice if they wish to return to work and continue to nurse their infant.
- Parents spend less time commuting to a centre that is far from work, reducing vehicle kilometres travelled.
- Office workers are able to better manage family and work balances, resulting in greater productivity. (e.g. parents able to return to part-time work, arrive to work earlier and leave later than otherwise necessary to meet child care hours)
- Parents/guardians spend more time with their children while commuting.

Walking distance – a 400 metre radius is potentially a five minute walk, but it is acknowledged that direct linkages from the site to the amenities are not always possible due to major constraints such as railway lines, arterial road systems, open spaces, creeklines, foreshores and water supply. If any of the above-mentioned major constraints are between the site and the subject child care facility, then an alternative measuring system should be used. If 400 metres can be drawn along the streets taking into consideration and showing suitable and safe crossing points, then the point can be awarded.

#### For more information

Visit the Queensland Government's Department of Communities Child Care website at www.communities.qld.gov.au/childcare/for a Developer's Kit to assist individuals or groups interested in establishing a child care service which provides details on all legislative and process requirements.

# Element 5. Deep planting

#### Intent of element

The development provides for deep planting, i.e. planting into the ground, of large canopy trees, to provide shade and contribute to local landscape amenity and Brisbane's unique subtropical identity.

The following sustainable development principles are addressed by this element.

- Design for subtropical place.
- Protect and restore natural ecosystems.

#### Available points

Three points are available if it is demonstrated that the development includes deep planting of large subtropical species canopy trees that are capable of being complementary in scale to the proposed building form in height and canopy.

Deep planting is provided to 10% of the site area in an integrated, accessible and landscaped area of the development.

Trees should be able to grow uninhibited and the canopy of the tree should reach a minimum of eight metres diameter within three to five years of planting.

Deep planting areas may be maintained around an existing large canopy tree or designed around proposed large canopy trees.

Setbacks to existing mature trees should be at the drip zones and root bowls to avoid sensitivity to work being undertaken as a result of development.

Each large canopy tree is to be planted in ground and provided with a suitable root barrier to help mitigate any potential future encroachment.

See Figure 1. Deep planting, on page 25.

#### **Evidence required**

To be awarded these points, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- Evidence showing that deep planting of large canopy trees has been incorporated in the design of the development. (e.g. approved Brisbane City Council landscape plan).
- Evidence includes plans, specifications, contracts and photographs.

#### **General information**

Residents and visitors value Brisbane's subtropical character. Development should create landscapes that contribute to Brisbane's subtropical character and provide for a blurring of interface between indoors and outdoors. Existing or proposed large canopy trees are a key component of subtropical design and provide landscape value by:

- creating shade for outdoor public or private spaces on the site
- allowing for an outdoor culture and providing employees with a visually attractive workplace
- providing shade for west-facing windows
- enhancing the aesthetic character and quality of the site and adjacent sites
- increasing privacy by screening views between different uses
- contributing to the reduction of the urban heat-island effect.

Deep planting into the site soil allows the trees to achieve their full height and canopy spread – an unlikely outcome when planting into aboveground planters or on podium. Planting directly into the existing subsoil is more sustainable as it requires less irrigation and limits the importation of topsoil.

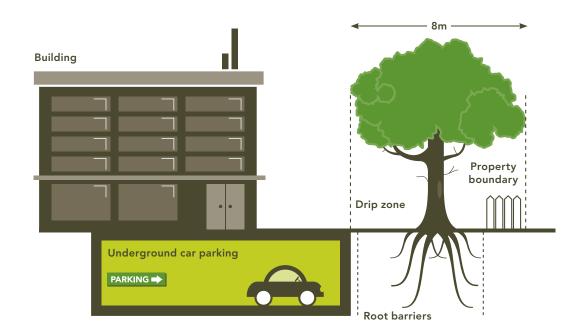
Planting trees is seen as a vital component of responding to the challenge of global warming and climate change.

# For more information

Contact Council on (07) 3403 8888 and ask for the Open Space Planning Team, to obtain copies of:

- Brisbane City Council's report on Subtropical Landscaping for Medium and High Density (2005), prepared by Marcus Mullholland (GHD).
- Landscape Amenity Values and Attributes Mapping (2006), prepared by GIS, City Design and Natural Environment and Sustainability, Brisbane City Council.

Visit the Queensland Government's Office of Urban Management website at www.oum.qld.gov.au on the *South East Queensland Regional Plan 2005-2026*. Section 8.3 Urban Character and Design includes subtropical design principles.



#### Figure 1. Deep planting

# Element 6. Roof garden/green roof

#### Intent of element

This element is to encourage developers to design and construct a significant green roof feature in their development.

The following sustainable development principles are addressed by this element.

- Design for subtropical place.
- Manage energy use.
- Develop adaptable buildings and spaces.

#### Available points

Four points are available if it is demonstrated that the development includes a significant roof garden that is suitable to the Brisbane climate and accessible to building tenants (and the public, if appropriate). To be eligible for the points, the green roof must:

- cover at least 35% of the total roof area
- be automatically irrigated by a non-potable water supply
- include facilities and provision for adequate long-term maintenance.

In addition, the applicant must provide a signed declaration, giving the applicant's consent that:

- · Council may organise at least two educational visits to view the installed green roof
- the applicant will provide Council with data and a case study after one year of occupancy that outlines the performance of the green roof. The applicant agrees that the case study provided may be made available to the public on Council's corporate website.

#### **Evidence required**

To be awarded these points, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- Evidence of a permanent green roof that has been incorporated from the earliest design stages.
- Evidence that the green roof covers at least 35% of the total roof area.
- Evidence includes plans, specifications, a list of planting materials, contract/s, maintenance regime and photographs.
- Evidence in the form of an agreement or contract providing details of responsibility and how ongoing maintenance of the green roof will be managed.

#### **General information**

A green roof is a roof that has been designed to incorporate growing plants. A green roof is not simply a selection of pot plants – it involves waterproofing and root repellent layers, drainage and filtration layers, growing medium and vegetation.

The green roof must be incorporated in the design at the earliest stages, as it will be heavier than an ordinary roof, and the building will therefore require different engineering specifications.

Green roofs are defined as either 'extensive' (where the depth of the growing medium is 15 centimetres or less) or 'intensive' (where the growing medium can be deep, and support larger shrubs and trees). As long as the green roof meets all other criteria, it can be either extensive or intensive in order to qualify for these points.

Green roofs should be planted with vegetation that is drought and heat tolerant.

# Green roofs should not be considered a substitute for in-ground deep planting of large canopy trees.

Green roofs have many environmental, social and economic benefits, including the following.

- Providing useable amenity space for building occupants and the community.
- Providing insulation for the building and reducing HVAC loads.
- Reducing urban heat-island effects.
- Providing opportunities for urban agriculture.
- Creation of ecological habitat in the city.
- Reducing and filtering stormwater runoff.
- Filtering particulates and carbon dioxide from the air.

# For more information

Visit the British Columbia Institute for Technology at www.commons.bcit.ca/greenroof/publications.html for a comprehensive set of links to green roofs guidelines and technical documents.

Visit Green Roofs for Healthy Cities at www.greenroofs.org

Visit Urban Agriculture Online at www.urbanag.info/Greenroofs\_Australia.html

# Element 7. Sustainability information signs

#### Intent of element

This element is to encourage developers to incorporate prominent signage in a publicly accessible place, which describes the sustainability features and benefits of the development.

This is to inform and educate visitors and occupants about the sustainable office development, facilitating greater take-up of sustainable buildings and better use of the sustainability features.

The following sustainable development principle is addressed by this element.

• Inform the end owner and user.

#### Available points

One point is available if the applicant demonstrates that the development has incorporated prominent sustainability signage in a publicly accessible place.

The signage should include:

- promotion of the Green Star Office As Built certification
- projected and/or real time water and energy usage of the development
- benefits of the development, particularly including aspects other than environmental outcomes.

#### **Evidence required**

To be awarded these points, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- Evidence of permanent sustainability signage that is located in a publicly accessible place, and is easily legible.
- The sustainability signage should be a non-temporary material. Appropriate materials include computer display, plasma screen display or perspex signage and murals. Temporary materials such as cardboard or coreflute are not eligible.
- Evidence includes plans, specifications, contract/s and photographs.

#### **General information**

There are numerous benefits to including sustainability information in new office developments, including the following.

- Visitors and occupants of the building will be more likely to use the building's features if they have clear visual cues.
- Prominently advertising the office building's sustainability will help generate demand for this type of building, encourage tenancies, and encourage other developers to improve sustainability standards.
- Sustainability signage will contribute to awareness raising, education and encourage behaviour changes of the general public on issues such as energy and water efficiency.

# For more information

Send an email to sbe@brisbane.qld.gov.au or telephone Council on (07) 3403 8888 and ask for the Urban Design Team.

# Element 8. Local community facilities

#### Intent of element

This element is to foster a positive community by encouraging developers to provide a significant neighbourhood facility in the development (such as a skating facility, community food garden, or space that can be used by community groups for information sessions, meetings or art displays).

The following sustainable development principles are addressed by this element.

- Apply an integrated and collaborative design and construction process.
- Design for subtropical place.
- Utilise land appropriately.
- Develop adaptable buildings and spaces.
- Build a safe and diverse community.

#### Available points

Two points are available if the applicant demonstrates that the development incorporates a community facility.

#### Please note: Roof gardens or child care facilities cannot claim these points.

Community facilities provide physical resources that are used substantially for community activities and services. They can include offices, meeting or function rooms, specialist activity spaces, outdoor areas, support facilities, equipment and/or adequate storage.

To be eligible for the points, the community facility must align with Council's plans and strategies. To ensure this, the applicant must consult with Council at the earliest stages and obtain advice in writing from Council's City Life Branch, confirming that the facility aligns with Council's vision for that particular location.

#### **Evidence required**

To be awarded this point, the applicant must attach the following evidence to their Sustainable Development Grant (Offices) Assessment Report.

- Evidence (including plans, specifications and photographs) that the development provides to the general public readily identifiable access to the community facility. Evidence should show that the facility is an integral and permanent part of the development and not a temporary add-on.
- Written evidence of consultation and advice received from Council's City Life Branch (Facilities Policy and Planning Team) regarding community facility planning and development, supply and demand.
- Written evidence that the community facility has been planned and designed in accordance with Council's advice.
- Documentation of meetings and agreements with community groups.

#### **General information**

Community facilities are a key component of Brisbane's social infrastructure. They are valued for their positive contribution to the health and wellbeing of the community, and in some instances, the environment. There are numerous benefits to including community facilities within a development, such as:

- providing a focal point for community interaction
- providing a place where people can build relationships and community identity
- providing places and spaces where residents can meet and carry out activities
- providing spaces and places that strengthen community life
- contributing to the developer's corporate social responsibility agenda.

A community facility provides flexible places and spaces that support, but are not limited to, the following opportunities:

- participating in or viewing formal, highly-structured and usually competitive sport activities
- participating in informal, unstructured and usually non-competitive recreation activities
- participating in artistic expression and creativity
- meeting, gathering and socialising, obtaining information and accessing essential services
- establishing, enhancing and experiencing a sense of community and cultural identity
- providing and receiving knowledge
- retaining, experiencing and interpreting natural qualities
- managing and demonstrating the reduction of energy and natural resource use
- retaining, experiencing and interpreting evidence of the past.

# For more information

Contact Council on (07) 3403 8888 and ask for the Facilities Policy and Planning Team for more information about the requirements of this element, or for a copy of *Council's Community Facilities Policy*.

Visit www.brisbane.qld.gov.au and search for 'Sport and Recreation Strategy'.

Visit www.brisbane.qld.gov.au and search for 'Indigenous Aspirations Strategy'.

▶ How to calculate your Sustainable Development Score:

Write the points achieved for each element and add up the total:

Element	Maximum points available	Points achieved
1. Best practice environmental performance (Green Star Certification)	105	
2. Excellence in water and energy management (Maximum Green Star Energy and Water)	3	
3. Community and stakeholder engagement	1	
4. Child care centre access	1	
4. Deep planting	3	
4. Roof garden/green roof	4	
4. Sustainability information signs	1	
4. Community facilities	2	
Sustainable Development Score (SDS)	Maximum = 120	SDS =

# **Glossary** of terms

**Applicant:** The entity that makes the application, and will receive the grant. The applicant may be the developer, the building owner, the building lessee or other stakeholder. The applicant must have written approval from the landowner to apply for the grant.

**Grant:** A financial incentive in the form of a lump sum payment, payable to approved office developments which, when built, meet the definition of a sustainable office development.

Gross Floor Area: As per the definition in Brisbane City Plan.

**Office Development:** A building used for professional or commercial purposes and classified as Class 5 under Part A3 of the Building Code of Australia.

**Project Control Group:** A group of Council officers whose role is to process Sustainable Development Grant Applications.

**Sustainable Office Development:** A sustainable office development is one that has achieved 60 points or more from Table 1 – Office Elements.

# For more information

Contact Council on (07) 3403 8888 and ask for the Urban Design Team, or send an email to sbe@brisbane.qld.gov.au